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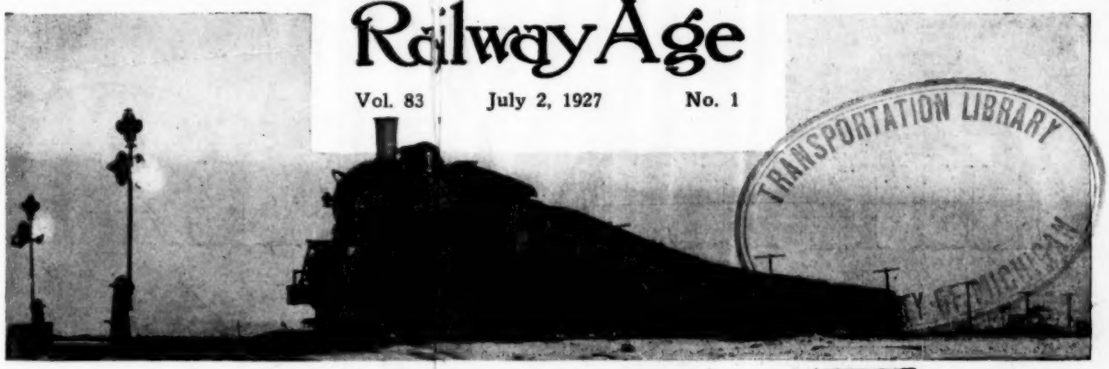

Seaboard Coast-to-Coast Limited Leaving West Palm Beach for Miami the First Time

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DUTCH BOY RED-LEAD

Railway Age

Vol. 83, No. 1 *July 2, 1927*

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Standard Container Types

WITH the co-operation of the shipper, the railroad and the government, through its Forest Products Laboratory at Madison, Wis., every attempt has been made to find the best type of container for each of a number of classes of commodities. That the results of this co-operation are already beginning to be felt is indicated in the reduction of loss and damage claims in recent years. That the reduction will be greater in the future, when more shippers use the standard containers, is to be expected. A step toward effecting wider use of the best of containers is seen in the announcement that the Bureau of Foreign and Domestic Commerce has made available a series of bulletins, the results of government research, covering seven distinct types of containers; fiber containers, ply-wood boxes, wire-bound boxes, wooden boxes, cooperage and steel barrels, crates and bales.

Group Physical Standards

THE wear and tear on the individual employed by the railroads may be great or small, depending on his particular make-up or upon his job. That the severity of his duties, in its effect upon the employee's physical welfare, is not too great is to be seen in figures reported following an examination of more than 10,000 train service employees of the C. & N. W. Of the total number examined at 90 different points on the system, only 40 were found to be sufficiently defective to be disqualified for service, and three of those have since reached the age of retirement under pension. The defective number amounted to only about 0.3 of 1 per cent of the number in service. Much has been said about the severity of railroading, but it would appear that it is an occupation that, in its effect on the employee's physical well-being, is more beneficial than detrimental. There are few other classes of employment where men, if they were examined, would show themselves as a group so physically fit.

Overhead Catenary Design

THE discussion which followed the presentation of five papers on overhead catenary design for railroad electrification presented at the A. I. E. E. summer convention brought out many sharp differences of opinion among catenary designers. A casual listener would probably have drawn the conclusion that he might better not build an overhead system until the different schools of thought on this subject were able to reconcile their differences of opinion. Analysis of the discussion, however, shows that all of the designers are agreed on fundamental requirements and that there are different ways of accomplishing the same result. Where differences of opinion arise, they are usually caused by the fact that the different designers were required to build catenary for different conditions. Given certain current values, locomotive speeds, pantograph pressures, right-of-way and operating limitations, and the overhead catenary erected by any builder would have certain definite characteristics. The papers presented constitute what is undoubtedly the most valuable symposium of material on this subject ever assembled, and with the discussion provide a means by which the builders can gain a more thorough understanding of each other's problems.

Draft Gear Maintenance

IT was suggested in these columns last week that the American Railway Association might well initiate a field investigation of draft gear conditions with a view to the development of a systematic program of draft gear maintenance. This suggestion is based on the belief that whatever it may ultimately be possible to do in the way of developing a draft gear which will not wear out, present draft gears do wear out. Indeed, considering the character of the service which the draft gear renders, it is hardly conceivable that a draft gear of the friction type can ever be expected not to wear out. The service of the gear, insofar as it dissipates energy, is directly comparable with the service of brake shoes on the wheels of the cars. No one expects the brakes to function properly with worn out brake shoes. Neither can the draft gear be expected to function with worn out friction elements. The protection of the car affected by the dissipation of energy in the draft gear is lost as wear in the draft gear develops uncontrolled slack between the cars. If this is true, is not any necessary expenditure for draft gear maintenance, even though at the outset it may be an actual addition to the cost of car maintenance, actually an investment which will result in saving many times as much in other items of car maintenance and in claims for damage to lading? Draft gear maintenance is not an item which can be considered by itself. It must be considered in relation to the effect of adequate car protection on other items of expense.

A New Source of Competition

COLONEL C. A. LINDBERGH, who has set a good many precedents since his remarkable flight to Paris, is about to embark, according to the press, as a competitor of the railroads for the passengers who find land transportation too slow, by organizing the first large-scale passenger-carrying air transportation line in the United States. In a statement issued after his conference with government officials at Washington last week he announced that he had been conferring

with a number of the more prominent figures in the commercial aviation field for the purpose of discussing the establishment, at an early date, of such a line that would be national in scope and that committees had been appointed to prepare the detailed plans of organization and the routes to be established. A further announcement concerning the plans was promised sometime during the next few weeks. Unlike some other competitors of the railroads, however, Colonel Lindbergh does not propose that his enterprise shall be financed in part by taxation of existing transportation companies, because in his speech at the Press Club reception in Washington on the day he returned from Europe he announced his opposition to the idea of government subsidies for passenger air transportation. This is almost as refreshing as his refusal to capitalize his fame by going into the "movies" and almost as novel as his failure to accept the offer of the railroads of a special train at a tariff rate of one dollar per railroad and nothing said about who was to pay the dollar.

Progress in Concrete Practices

THERE are still many men engaged in concrete construction who associate quality of concrete solely with the richness of the mix in cement. It is true, of course, that after all has been said, the strength of concrete proportioned according to modern theories is dependent on the relative amount of cement used. But what so many people have failed to realize is that there are many other factors which, if not properly controlled, will neutralize influences favoring high strength. Concrete is made by thousands of constructors with aggregates of almost infinite variety under all kinds of physical conditions and, as was shown in the discussion of concrete at the convention of the American Society for Testing Materials last week, developments in the science of making concrete have been exceedingly rapid in recent years, so rapid, in fact, that even the most progressive engineer or contractor has difficulty in keeping abreast with current progress. This fact is now definitely recognized by those who are encouraging better practice in concrete construction, and promotional work in the last year or two has been directed more largely toward the dissemination of simpler rules for procedure with marked success. Considering the rapidity of the developments in this field and the revolutionary nature of some of the results of scientific research, there is encouragement in the fact that they are being accepted as rapidly as they are, even if many builders have failed to take advantage of them.

Lake Cargo Rates Again

THE rapid development of a new lake cargo coal rate case, or perhaps more accurately, a new development of the case that has already been before the Interstate Commerce Commission in various forms since 1912, is indicated by the announcement that the principal roads serving the southern West Virginia and Kentucky coal fields propose to reduce their rates on lake cargo coal 10 cents a ton on August 10, if they are not suspended. The commission, in its recent decision reducing the rates from the Pennsylvania and Ohio districts by 20 cents a ton, after a re-examination of transportation costs in the light of the depressed condition of the northern district coal industry and some political pressure, also suggested a reduction of 10 cents a ton in the rates from the Fairmont district of northern West Virginia. Lines serving the Fairmont district having indicated an intention of following this advice, the roads serving the southern coal fields, the Chesapeake & Ohio, Louisville & Nashville, and Norfolk & Western, have now announced their purpose to reduce their rates 10 cents a ton also, to meet the new Fairmont rate, and incidentally to reduce by that much the differential which the commission tried to give the northern fields without specifically prescribing the relations to be observed between the competing districts. In reducing the rates from Pennsylvania and Ohio to the lakes the commission based its decision in part on the Hoch-Smith resolution, which directs it to consider the conditions prevailing at any given time in an industry, although when the resolution was passed Congress probably had its fingers crossed as to all industries except agriculture and livestock. The commission still has another bow to its string in its power to prescribe minimum rates, but in its latest lake cargo decision it manifested some reluctance to use it. At any rate, the lake cargo rate adjustment will probably be with us for some time to come and as good a guess as any of the final outcome seems to be a reduction of rates all around.

"We"—The Employee and the Railroad

"MONTHS of creative and constructive efforts to put the railroads' case in a fair and intelligent and favorable way before the public can be wrecked in an instant's time by what may be the thoughtless act of some minor employee. If we really can make the mass of the employees realize that in truth and in fact they are, in the eyes of the public, the railroad itself, isn't it reasonable to believe that there would be a new friendliness and a new dignity in their dealings with our patrons?" This significant statement was made by Benjamin Bell, editor of the Chesapeake & Ohio and Hocking Valley Employes' Magazine, in an address at the recent conference of the American Railway Magazine Editors' Association in New York City. It represents, in a way, one of the chief purposes or objectives of the employees' magazine—getting the employee, the management, the public and the investor to recognize the mutuality of their interests. Lindbergh, by the expression "we," has captured the imagination of the world in identifying his airship and himself as real partners in a great enterprise. We have known locomotive engineers to have much the same feeling and attitude toward the locomotive—it seemed to be almost like a human companion to them.

A railroad may be seen as a great aggregation of equipment and facilities, but, more properly, it may also be visualized as a vital organism, rendering an invaluable service and carrying tremendous responsibilities for public welfare. The great task to which the employees' magazines have set themselves is to so weld the whole railroad personnel and structure that each employee, from the chief executive to the lowliest worker in the ranks, will feel that he is an integral part of a great spirit or vital force—much more like a real personality than an airship or locomotive—without which the physical equipment is absolutely useless. The efficiency of the railroad, its economical operation, its usefulness to the community, are in direct proportion to the extent to which the employees feel "that in truth and in fact they are * * * the railroad itself."

The American Railway Magazine Editors' Association is not a large organization, but by bringing to-

gether the editorial representatives of railroad employees' magazines for frank discussion and interchange of ideas and experiences, it has been an important factor in strengthening the magazines and helping them more effectively to promote good fellowship and understanding between the managements and the employees and between the various classes of employees.

Large Savings in Fuel Consumption

PERHAPS the most striking illustration of the economies in operation still being effected by the railways by means of investments in physical improvements and increases in efficiency of operation is afforded by the large savings they are still making in the use of coal. In the first four months of this year, as the statistics of the Interstate Commerce Commission show, they consumed almost 2,200,000 less tons of coal than they would have if they had consumed as much in proportion to the freight and passenger service rendered as in the corresponding months of 1926. At the average price actually paid for coal this effected a saving of $5,800,000. The average amount of coal consumed per one thousand gross ton-miles of freight service was reduced from 150 to 141 pounds and a corresponding saving was made in passenger service. At this rate the total saving in fuel in 1927 as compared with 1926 would be about $17,000,000.

The main significance of these figures lies in the fact that they represent a large increase over big savings that have been made year by year since 1920. Both the average price of fuel per ton and the amount of it consumed in proportion to the railway service rendered have substantially declined since 1920. Only the saving in the amount consumed can, of course, be attributed to improvements in equipment and in operating methods. If coal is used as efficiently throughout 1927 as it was in the first four months of the year the difference between the efficiency of its use in 1920 and in 1927 will result in a saving this year, calculating on the basis of the current average price, of about $92,500,000. The savings —still comparing with 1920—in the previous six years, due to the same cause, have been as follows: 1921, $26,528,000; 1922, $23,670,000; 1923, $28,163,000; 1924, $48,930,000; 1925, $66,292,000; 1926, $75,640,000, a total of $269,223,000, which apparently will be increased in 1927 to about $363,000,000. Many locomotives got into bad condition during the shop employees' strike of 1922. The number of pounds of coal consumed per one thousand gross ton-miles of freight service in that and subsequent years were as follows: 1922, 163; 1923, 161; 1924, 149; 1925, 140; 1926, 137. The reduction in the first four months of this year as compared with the first four months of 1926 was six per cent. If this rate of reduction is maintained throughout the year the average consumption per one thousand gross ton-miles in 1927 will be only 129 tons, or about 21 per cent less than in 1922.

After having steadily increased since 1922, the net operating income earned by the railways as a whole is now showing a tendency to decline. This is due to increases in taxes, over which railway managements have no control, and to declining rates and advancing wages, which are largely beyond their control. It is not due at all to operation, the efficiency of which is increasing even more rapidly than in preceding years since the return of the railways to private management.

Tentative Valuation Work Near Completion

THE Interstate Commerce Commission has now practically reached the end of one stage of its big job of valuing the railroads—the completion of tentative primary valuation reports, as of various valuation dates ranging from 1914 to 1921, on 250,000 miles of road. This has generally been regarded as the big end of a work which has now cost the government about $30,000,000 and the railroads about $90,000,000 more, and so far as the physical aspect is concerned it undoubtedly is. To railroad men, however, a more important phase of the work, in-so-far as the use to be made of the results is concerned, is that remaining to be done and the methods to be applied, first, in making the valuations final as of their respective dates, in the light of the hearings and conferences on the carriers' protests, and, second, to bring the valuations up to date.

As the commission has thus far shown little disposition to modify to any great extent the findings of its valuation bureau and as the Supreme Court has declined to review either tentative reports or final reports not brought down to date and not used as the basis of a specific order, interest is now largely centered on the prospects for a court review of the O'Fallon decision. However, the tentative reports and their aggregate, now soon to become available, will continue to be important because of the use the commission may continue to make of them indirectly in various ways, as it has done.

Only a few of the tentative reports now remain to be served, the principal ones yet to be issued being those on the Union Pacific, Chicago, Milwaukee & St. Paul and Baltimore & Ohio. The latter two have been promised for some time in July.

It will soon be possible to know the total of the commission's tentative valuation for the roads of the United States. So many of the reports are now out that it is known that it cannot be very far from the $18,900,000,000 figure used tentatively in the 1920 rate advance case, Ex Parte 74, as of December 31, 1919, which with additions made since has been referred to by members of the commission as making up a total of something like twenty-two billions to date.

It will be more or less interesting, however, to see how close the aggregate of the individual tentative valuations will come to the aggregate value adopted by the commission for the purposes of that case, which the commission has found it unnecessary to restate for later rate cases. The 1919 tentative aggregate was based on the underlying data collected by the commission for its valuation reports, subject to such readjustment as may have been made to represent the uncompleted part of the work and the additions to property made between the inventory dates, 1914 and later years, and the end of 1919. When the total of the tentative reports is made available, therefore, it will be necessary to add something for the later years to make it comparable with the rate case valuation, and several billion dollars more to give the lowest possible basis for a present-day figure.

With the new fiscal year beginning on July 1 the commission enters upon a new stage of its work, that of bringing the primary valuations down to date, and its appropriation as voted by the last Congress includes a large sum for that purpose, although there is still much to be done to complete the hearings on the tentative reports before making them final. A large amount of work has already been done by the commission's valuation forces in the way of checking up the carriers' reports of additions and betterments and in estimating the

amounts to be added to the primary valuations for use in recapture cases by the methods described in the O'Fallon decision, but apparently some of that will have to be done over again for the purpose of ascertaining final values in accordance with the valuation act.

Another year remains of the three-year program on which the commission's appropriation bills have been predicated in which to fulfill the promise made by Commissioner Lewis to the appropriation committee relating to the completion of additional final reports as of the respective valuation dates and of the hearings on the carriers' protests.

What Limits Progress of Consolidation?

PRESUMABLY, the railroads, the investors in their securities and the public still agree regarding the desirability of merging the railroads of the country into a limited number of systems as advocated by the farmers of the Transportation Act. They will also agree that unification progress to date has been limited. The true significance of this does not seem to have received the attention it merits and, in consequence, there has not been adequate analysis of the reasons therefor.

Examination of the economics of industrial consolidation will develop that for many years mergers of corporations were impeded by the Sherman Anti-Trust Act which was placed on the statute books in 1890. This act has been described as an unusually apt codification of the will of the American people as expressed in opposition to the trust movement. It appears, at any rate, in the 36 years it has been a law, to have deterred mergers only at those times when public opinion was decisively opposed to the formation of trusts or fearful of the abuses of the power that might lodge in large aggregations of capital. Such periods of public opposition existed at the time of the passage of the act and again about 1902 and notably just prior to the World War.

Non-existence of sufficiently decisive public opposition about 1898 or 1900 permitted the building up of virtual monopolies in any number of leading industries. This movement, however, caused a public disfavor which resulted in putting teeth in the Sherman Act which were thereafter felt by one large corporation or another until the war. Today we are in another period in which public opinion regarding mergers is rather more favorable than otherwise, combined with which corporation managers seem to be showing a greater heed of the public welfare than may have been the case in an earlier era. At least, mergers in considerable number have been brought to fruition in any number of industries, those in electric light and power being particularly noteworthy. The Sherman Act is still on the books. It is still available and has on two or three important recent occasions been used to prevent mergers that the government at Washington thought undesirable. Except in these instances, the mergers are proceeding without any change in the law. Public opinion may have changed but the law has not.

Public opinion has likewise changed with respect to railroad mergers but otherwise with the railroads the situation with respect to mergers is extremely different from what it is in other industries. The difference comes in the contradictory factors whereby it happens that although the law has been changed with the intention of assisting railway unification, the unification is not taking place. The result is that the only industry with respect to which the law has been changed to facilitate mergers, seems to be about the only industry lacking substantial progress in that direction. Why should this be the case?

It will be remembered that the advocates of the Sherman Act did not intend its provisions to apply to railroads. It was the courts that held it applicable, and then several court proceedings were instituted under it to dissolve railroad mergers—the most notable being the Northern Securities case—and up to 1920 it was a decidely powerful deterent to railway unification. This was all changed by the Transportation Act which substituted new provisions applying to railroads intended to favor railway unification in place of the provisions of the Sherman Act condemning it.

Does the Law Need Change?

Inasmuch as the law relating to railroads was changed to assist railway consolidation, it might be supposed that if it has not resulted in such consolidations being effected more promptly, there might be something wrong about the law. Many people hold to this view and several efforts have been made to change the law accordingly. The law, as it stands at present, permits in paragraph 2 of section 5 of the Transportation Act one railroad to acquire another—the Interstate Commerce Commission agreeing that such course is in the public interest—by lease or by the purchase of stock "or in any other manner not involving the consolidation of such carriers into a single system for ownership and operation." Such complete consolidation is covered in section 6. The complication is that it must be in accordance with a plan for the consolidation of the carriers into a limited number of systems to be drawn up by the commission. The lattter has long since advised Congress of its inability to draw up this plan and the efforts to change the law relate primarily to the removal of the requirement that it do so. In the meantime, complete consolidations are made impossible for the reason that the consolidation plan to which they must adhere is non-existent.

The record, however, shows that something else is needed than merely a change in the law.

The record evidences that there are 238,000 miles of Class I railroads. To date the Interstate Commerce Commission has permitted leases of subsidiary lines hitherto already controlled by ownership of capital stock aggregating only 8,000 miles. It is also true that it has permitted the Southern Pacific to retain the Central Pacific, while the federal courts have allowed the Reading to continue temporarily its majority stock control of the Central of New Jersey. Inasmuch as these represent no actual changes of control they can hardly be said to represent substantial unification progress, however desirable they may be from another view.

There have, however, been cases in which the commission has permitted roads, not forming subsidiary companies, to be acquired by lease totaling 2,800 miles. In addition, there have been unifications resulting from the acquisition of majority control of stock totaling 7,000 miles. Adding the two together and including the original Nickel Plate merger, 1,700 miles, gives a total of 10,300 miles of Class I railroads representing exactly 4.3 per cent of the Class I mileage of this country. Such is the limited amount of progress that has taken place with reference to the consolidation of railroads.

On the other hand, the commisison has rejected unification plans totaling 18,000 miles of Class I railroads. In other words, it has rejected plans covering very much more mileage than embodied in the unifications which it has approved. The pending proceeding of the New York Central lease of its subsidiary lines is not

included in the foregoing figures. The Interstate Commerce Commission has not handed down its decision nor indeed does the plan embody any change of control.

The figures speak for themselves. They might be made a text of much extended comment. The truth is that the chief deterrent to railroad consolidation lies less in the present provisions of the Transportation Act relative to railroad consolidation than in the inability of the Interstate Commerce Commission to take other than a negative attitude on this extremely important question. Fortunately, there are other compensating developments. One is that in spite of the discouragements embodied in an extended series of adverse or negative decisions by the commission, the railroads continue to attempt to effect merger plans, even if they presumably do realize the overwhelming probabilities that it will be difficult or impossible to convince the commission that the plans offered are in the public interest. The other compensating factor is that some members of the commission themselves realize the shortcomings of that powerful and august body. Nothing railroad men could say in criticism could be any more severely critical of the commission than have been some of the dissenting opinions in the commission's own merger decisions.

Results of Western Arbitration

THE most outstanding and significant fact regarding the wages awarded to the conductors, trainmen and yardmen of the western railways is that the arbitration board, in reaching its decision, gave weight to the important differences between conditions in the east, the southeast and the west. The board that decided this case, unlike those that have decided similar controversies in other territories, had enough confidence in the reasons why it reached its conclusions to state these reasons. It is to be hoped that in future other arbitration boards will follow its example in this respect.

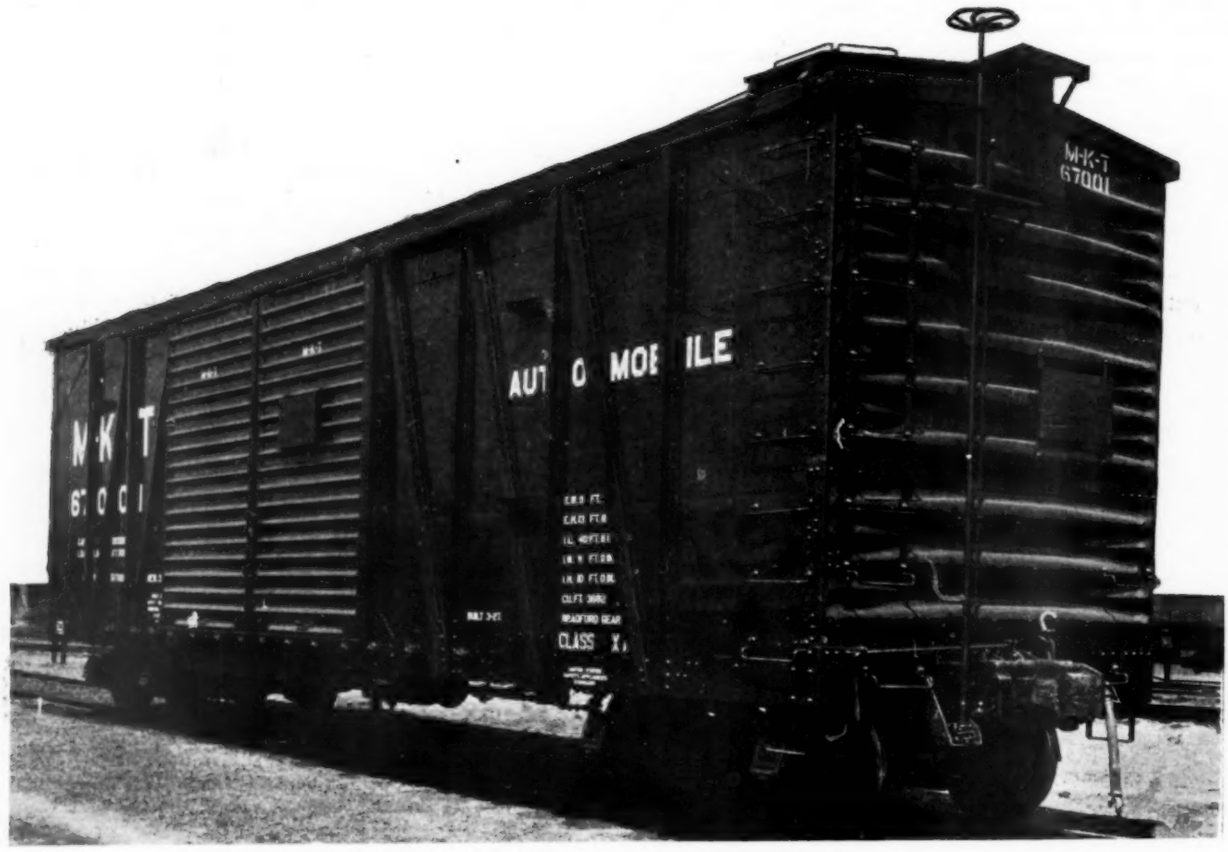
The board found that until recent advances in rates of pay were made in the east and southeast, the conductors and trainmen in those territories were making smaller annual earnings than those in the west. By taking this into consideration it indirectly gave weight to differences in operating conditions. Wages in train service are based on train miles as well as hours. The average speed of freight trains in the west is greater than in the east or southeast, and, therefore, in a given number of hours trainmen in the west will, at the same rates per mile, make larger earnings than in the east or southeast. The board's conclusion that, without any advances in their rates of pay, conductors and trainmen in the west can, in spite of recent advances in the east and southeast, make as large earnings as those in these other territories, undoubtedly is correct. This largely disposed of the argument that rates of pay should be advanced in the west merely because they have been in the east and southeast.

It is plain that the two public members of the board, who had the deciding votes, gave much weight to the fact that the earning capacity of the railways of the west is at present less than that of railways in other territories and to the causes of this. It is pointed out in the majority opinion that freight rates in the west have been advanced less since 1915 than elsewhere, and that the return earned on tentative valuation, as well as on investment of road and equipment, has been and still is much less. The situation in agriculture and rate decisions of the Interstate Commerce Commission are mentioned as causes of these differences in financial results.

While conductors and trainmen in road service were denied higher wages, advances of 7½ per cent were granted to employees in yard service. In the west, as elsewhere, most yardmen have a relatively high cost of living because they give in cities of 100,000 population or more; and as they work on a strictly hourly basis, their earnings, without an advance in their hourly rates, would be less than those of men doing similar work in other territories. The reasonableness of the advance to the yardmen cannot be seriously questioned.

The reasons given for the denial of advances to conductors and trainmen in road service are criticized by spokesmen of the employees. Their contention is that hourly and mileage rates of pay for the same kinds of work should be the same throughout the country practically regardless of differences in transportation and other economic conditions. It is a healthy sign that one arbitration board has had the courage, good sense and fairness to reject this contention. There are really three parties to every controversy regarding wages or rates, whether they are all formally represented or not. These are, of course, railway employees, railway owners and the public. The Interstate Commerce Commission decides what freight and passenger rates the public should be required to pay. The wages of employees and the return upon invested capital must both be paid from the earnings derived from the rates. If the wages of a group of railways are made too high in proportion to the rates they are allowed to charge the result must be an inadequate return on capital. In the long run an inadequate return on capital must result in preventing the investment of the capital required to render it possible to effect the enlargements and improvements in railway facilities essential to rendering adequate service with maximum economy. In the long run adequate investment of capital furthers both advances in wages and reductions in rates, and, therefore from the standpoint of employees and the public, no less than that of railway owners, it is contrary to sound policy to so adjust wages and rates as to prevent capital from getting a reasonable return.

If the employees accept this decision in the right spirit it will, in the long run, be beneficial to all concerned. They have for years been told by some of their leaders that their wages should be fixed practically regardless of the effects on net earnings and rates. They have even been encouraged to support for public office men who were advocating reductions of rates and net earnings at the same time that the employees were seeking advances in wages. It is desirable that the employees as a class should be awakened to a realization of the plain fact that over long periods their wages must and will be determined by the conditions in the railroad industry. If the railroads prosper, owing to their ability to develop and operate their properties efficiently and to get reasonable rates, then advances in wages can and will continue. On the other hand, if, owing to failure of traffic to grow, to unduly restrictive regulation of rates and to resulting inability to raise adequate capital, the railways are not able to prosper and constantly increase the efficiency of their operation, wages cannot and will not continue to increase. The main reason why certain classes of employees have been granted in the east and southeast and denied in the west advances in wages they have sought is that the eastern and southeastern groups of railways have been comparatively prosperous and the western group of railways has not been. If employees will see this, and be influenced by it to co-operate with the managements in getting reasonable freight and passenger rates and the best possible operating results, the resulting benefits will be shared by the public, the railways and the employees.



One of 500 Automobile Cars Now Being Built by the Missouri-Kansas-Texas

M.-K.-T. Automobile Cars with 12-ft. Side Doors

Designed for general box car and grain traffic—
Single-sheathed type of 50 tons capacity

FIVE HUNDRED 50-ton single-sheathed automobile cars are now being built by the Missouri-Kansas-Texas at its steel car shops, Denison, Texas. These cars were designed, not only for handling automobiles, but also for general box car service and for carrying grain. The length over the striking castings of these cars is 42 ft. 1½ in. and the body has an inside length of 40 ft. 6 in., inside width of 9 ft. and height of 10 ft. 7/16 in. A number of interesting features have been incorporated in the design of these cars, one of the most important being the large side door clear opening, which is 12 ft. wide by 9 ft. 4¾ in. high.

The Superstructure

The superstructure is composed of two interchangeable trusses riveted to the side sills, each truss being framed in eight panels, including the door opening. The center line of the door opening is located 4 ft. ⅝ in. beyond the transverse center line of the car to facilitate the loading of automobiles, especially those having long wheel bases.

The door posts are 4 1/16 in. 10.3-lb. Z-bars and the side posts and diagonal braces are 3 1/16-in. 8.5-lb. Z-bars. The side plates are 4 1/16.-in. 10.5-lb. Z-bars reinforced with ¼-in. by 17-in. steel plates, which extend from the door posts to the ends of the car. All the side posts and diagonal braces are riveted to the side sills and side plate reinforcing plates. In addition, a reinforcing member consisting of a 4 1/16-in. 10.3-lb. Z-bar is riveted to the side plate over the doorway. This member also forms the riveting flange; as well, for the door hood.

The cars are equipped with bottom-hung Youngstown corrugated steel double doors, as shown in the illustrations. The doors are provided with bottom rollers and brackets, door stops and locks, furnished by the Union Metal Products Company. These cars are also equipped with Dreadnaught steel ends and with Hutchins Universal roofs, No. 16 gage, which are provided with steel running board saddles and pressed steel carlines. The Hutchins chain fall support section is applied to each car, extending from end to end along the longitudinal center line, and securely riveted to each car line. The inside of

each car is equipped with 32 wrought iron lifting rings secured to the side plates.

The flooring is No. 1 common dense southern yellow pine, 2¼ in. thick, tongued and grooved, and the sheathing is No. 2 clear and better vertical grain Douglas fir, 1½ in. thick, with the part forming the girth 2 in. thick. The side girth consists of ten boards and is located 33⅜ in. from the bottom of the floor and extends up 51¼ in. All siding extends in one piece from the door posts to the steel ends. The end lining is 1½ in. thick of No. 1 common dense southern yellow pine.

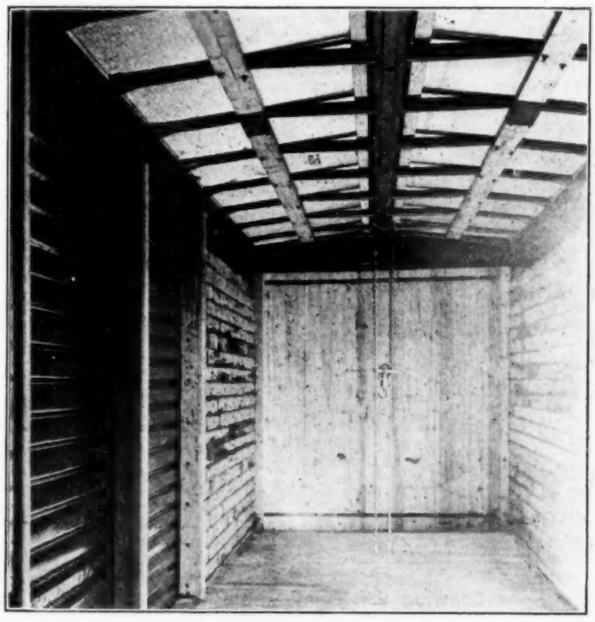
The Underframe

The underframe of the car is of steel construction, the center sills consisting of 12-in. 40.3-lb. rolled steel A. R. A. standard center sill sections, which extend continuously between the end sill striking castings. The center sill cover plate is of copper-bearing steel. The side sills are 10-in. 20-lb. channels reinforced under the door opening with 6-in. 10.5-lb. channels. The bolster is of the box girder type, having two copper-bearing steel diaphragms, and top and bottom cover plates of copper bearing steel. There are live crossbearers of copper-bearing steel, having top and bottom copper-bearing steel cover plates. The car has four copper-bearing steel crossties, two of which are located between the crossbearers and two between the crossbearers and bolsters. The end sills consist of 6-in. by 4-in. by ⅜-in. angles.

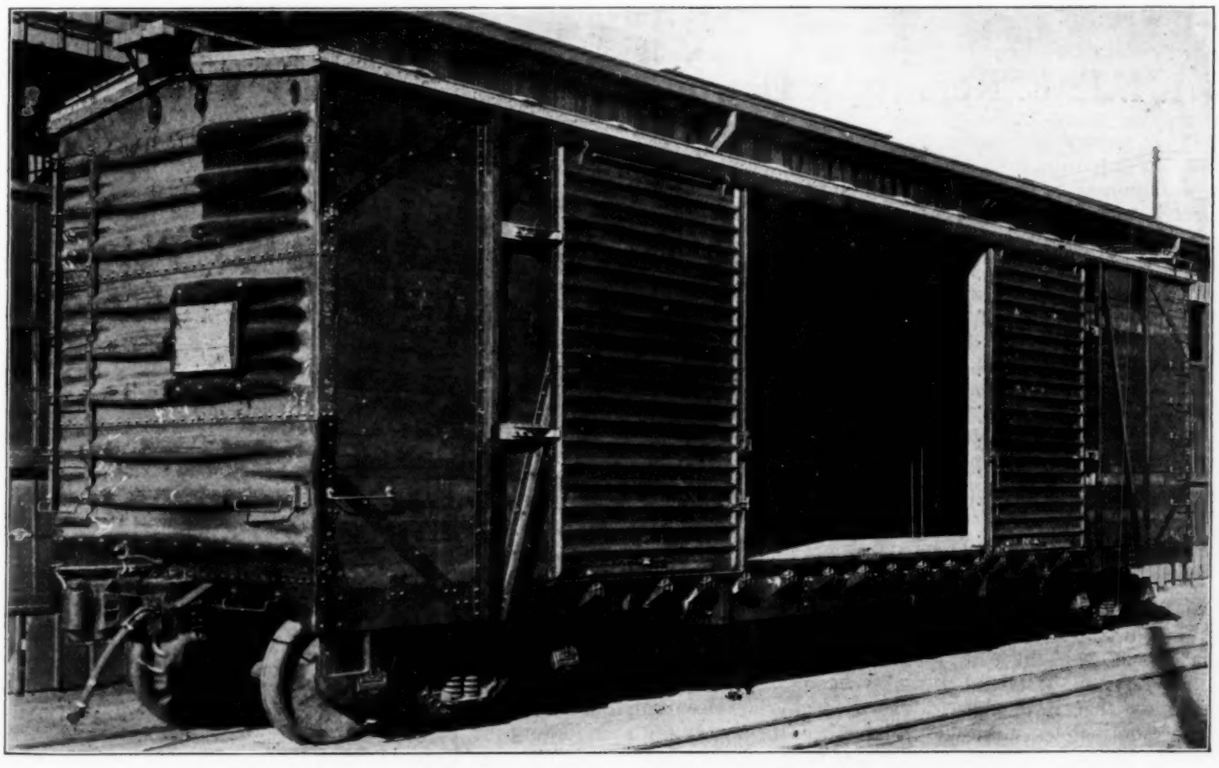
The couplers are Type D with 6-in. by 8-in. shanks.

The General Dimensions of the Missouri-Kansas-Texas Automobile Cars

Length inside	40 ft. 6 in.
Width inside at floor	9 ft. 1 in.
Width inside of girth	9 ft. 0 in
Height inside	10 ft. 7/8 in.
Length over striking castings	42 ft. 1½ in.
Length over end sills	40 ft. 9 in.
Width over side sills	9 ft. 4 in.
Width side door opening, clear	12 ft. 0 in.
Height side door opening, clear	9 ft. 4¾ in.
Width over eave	9 ft. 9⅝ in.
Height top of rail to top of floor	3 ft. 7⅞ in.
Height top of rail to running board	14 ft. 8⅞ in.
Height over hand wheel	15 ft. 2½ in.
Distance center to center of trucks	31 ft. 1½ in.
Cubic contents	3,682 cu. ft.
Capacity	100,000 lb.
Light weight	51,700 lb.
Load limit	117,300 lb.



Interior of New M.-K.-T. Automobile Cars

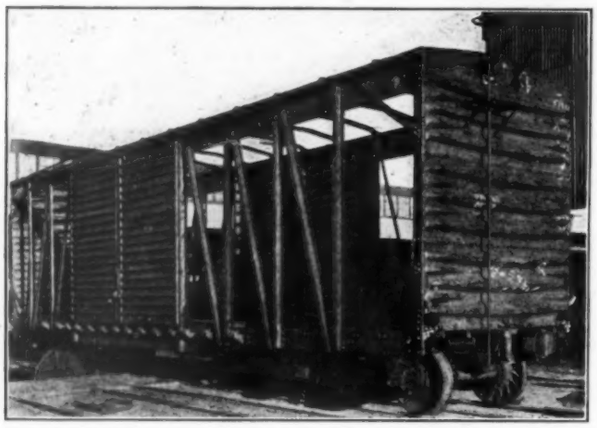


These Cars Have a Clear Side Door Opening 12 ft. Wide by 9 ft. 4¾ in. High

The draft gear is the Bradford type R-1-A. The Union coupler centering device and the Imperial top-operated uncoupling rigging are used.

These cars are equipped with Dalman 50-ton trucks having 5½-in. by 10-in. journals, with the journal boxes cast integral with the side frames. Wood's roller side bearings are used. The journal box lids are the Railway Steel Springs Company's torsion type. The journal boxes are fitted with Security dust guards.

The cars are equipped with Ajax No. 2+ brake beams,



View Showing the Frame and End Construction

Creco third point support and Universal bottom rod supports. Shaefer bottom rods are used. The brake step is of pressed steel furnished by the Viloco Company. The Universal hand brake attachment is applied to all of the cars.

The air brake equipment is the New York Air Brake Company's type C, 10 in. by 12 in., with double pressure retaining valve. The piping is double strength.

A. I. E. E. Reports at Detroit

SIX papers and two committee reports on subjects having railroad applications were presented at the summer convention of the American Institute of Electrical Engineers held in Detroit, Mich., June 20-24.

The report of the committee on transportation was presented by J. V. B. Duer, electrical engineer, Pennsylvania Railroad, committee chairman. It described progress made with railroad electrification during the year 1926. Data were also included on marine propulsion, bus transportation, Diesel-electric locomotives, gas electric cars, automatic sub-stations, high-speed circuit breakers, mercury arc rectifiers, motor-generator locomotives, a new Pennsylvania test plant for electric cars and locomotives and a new single-phase induction motor built in Germany designed to compete with the a.c. commutator motor.

The second report was that of the committee on electric welding, presented by chairman J. C. Lincoln, vice-president, Lincoln Electric Company, Cleveland, Ohio. A statement made by E. Wanamaker, electrical engineer, Chicago, Rock Island & Pacific, included in the report, said in part that the use of welding has enabled the Rock Island to make repairs so much more promptly that it is able to get the same service with 20 locomotives less than would have been necessary with the old methods of repair. To put it in another way, welding has enabled the Rock Island System to reduce investment in locomotives by over $1,000,000 without decreasing the number of engines available for service. This is in addition to the savings effected by the use of welding over the older methods of repair.

"Mercury Arc Rectifier Phenomena" was the title of a paper presented by D. C. Prince, research laboratory, General Electric Company, Schenectady, N. Y. It dealt with the fundamentals of rectifier behavior. The paper outlined weakness of existing designs and indicated that there is need for published information covering what happens in a mercury arc rectifier during operation.

Catenary Design

Five papers on overhead catenary design were entitled: "Current Collections from an Overhead Contact System Applied to Railroad Operation" by S. M. Viele, assistant electrical engineer, Pennsylvania Railroad; "Catenary Design for Overhead Contact Systems" by H. F. Brown, assistant electrical engineer, New York, New Haven & Hartford; "Catenary Construction for Chicago Terminal Electrification of Illinois Central Railroad" by J. S. Thorpe, distribution engineer, Illinois Central; "Collection of Current from Overhead Contact Wires" by R. E. Wade and J. J. Linebaugh, General Electric Company; "Railway Inclined-Catenary Standardized Design" by O. M. Jorstad, Westinghouse Electric & Manufacturing Company.

The paper by Mr. Viele discussed from a non-mathematical standpoint certain factors which should enter into the design of an overhead contact system. It emphasized desirable features, mechanical and structural, and indicated practical limits which conditions will permit in the attainment of these features. Of especial interest were slow motion moving pictures presented with the report. These pictures taken at from 600 to 800 per minute were projected at 16 per minute and showed the movement of the catenary caused by the passing of pantographs under various conditions. Curves were plotted from the data collected, to show the nature of the traveling wave in the contact and catenary wires.

The paper by Mr. Brown covered the long experience of the New Haven in the use of overhead wires and during the discussion was repeatedly referred to as a classic on catenary design. Part I of the paper dealt with construction over straight or "tangent" track, and was a review of methods and formulas which, while not new, are necessary as an introduction to part II, which not only included "tangent-chord" construction, but dealt at length with the design of the so-called "inclined catenary" and its adaptation to curved track.

The third paper by Mr. Thorpe presented the subject from another angle by dealing with practical methods of determining hanger lengths, hanger positions, stresses in the complete structure, etc. Brief mention was also made of the principal items of material entering into the construction and to methods of maintenance.

The fourth paper by Mr. Wade and Mr. Lindbaugh described the methods developed by the General Electric Company for collecting large currents from overhead wires. Various types of overhead have been installed over a four-mile test track at Erie, Pa., and currents up to 5,400 amperes collected with one pantograph. Conservative evaluation of these tests and experience gained from operating lines indicate that 2,000 amperes or more can be successfully collected at any speed up to 70 miles an hour with one pantograph and 4,000 amperes with two pantographs.

The fifth paper by Mr. Jorstad described what is termed the "ideal inclined catenary." He showed how catenary construction on curved track can be greatly

simplified when a certain definite relation is maintained between the relative weights and tensions of the contact wire and the supporting catenary.

Discussion which followed the presentation of the five catenary papers was spirited and was limited only by the time available.

Right of Trunk Lines to Control W. & L. E. Questioned

WASHINGTON, D. C.

HEARINGS on the applications filed by officers of the Baltimore & Ohio, New York Central and New York, Chicago & St. Louis with the Interstate Commerce Commission for authority to serve as directors of the Wheeling & Lake Erie, in which the three roads have recently acquired a 17 per cent stock interest each, were brought to a close on June 25 after the commission had been asked to decide as to the right of the three companies even to hold the stock or exercise any of the rights of ownership.

The legality of such holding was questioned by C. F. Taplin, general counsel of the Pittsburgh & West Virginia, which with the Wabash has been opposing the applications. In a series of questions which he asked to have submitted to the commission, Mr. Taplin asked either that the commission, in any order it may enter on the applications, take into consideration the right to hold such stock and enter an affirmative order in respect of the holdings, or that he be permitted to file a formal complaint bringing the question before the commission, to be considered on the record, to the end that a formal order may be entered respecting the right of the trunk lines to hold and vote stock of the Wheeling company. He said that such a complaint would be based on the consolidation provisions of the transportation act, relating to the acquisition of control, and on the Clayton and Sherman anti-trust acts as well as the federal conspiracy statute, although he understood that the commission was not so directly concerned with the latter.

R. Marsden Smith, general attorney of the Baltimore & Ohio, had asked to have certified to the commission a request that the Pittsburgh & West Virginia furnish a list of its stockholders and a statement of the dates and cost of its acquisitions of stock in the W. & L. E. Mr. Taplin then asked that if the request is certified to the commission it be accompanied by a similar request that the B. & O., New York Central and Nickel Plate furnish a list of their stockholders. Clyde Brown, general solicitor of the New York Central, objected to this as irrelevant and on the ground of the magnitude of the request. He said the New York Central has 35,000 to 40,000 stockholders and that the commission has on file lists of the 20 largest stockholders of each road. He also said the request was largely retaliatory and pointed out he had not asked for P. & W. V. stockholders.

Another question asked by Mr. Taplin called for complete and detailed information as to the relations of the Nickel Plate, Chesapeake & Ohio, Erie and subsidiary companies to the Wheeling, in view of the control of the Nickel Plate and C. & O., by the Van Sweringen interests. J. H. Agate, assistant general counsel of the Nickel Plate, objected to this, saying that the Nickel Plate does not own a share of C. & O. or of any company that does, because its holdings have been transferred to the Chesapeake Corporation and its shares distributed to the Nickel Plate stockholders. Mr. Taplin said he wanted to go behind the corporate control and have an exact statement of the "interrelationships that control these roads," Mr. Burnside finally asked him to put his request in writing.

Mr. Taplin also asked for a copy of the Pennsylvania's statement filed with the commission in objection to the "four-system" plan recommended to the commission in 1924 by executives of the B. & O., New York Central and Nickel Plate. Mr. Brown described some of the circumstances connected with the submission of the four-system plan and said he thought he had seen a proof of a statement of the views of the Pennsylvania but was not in a position to say whether it had actually been filed.

No ruling was made on the request by Mr. Taplin earlier in the proceeding that subpoenas be issued for the appearance of O. P. Van Sweringen and Bertram Cutler, representative of John D. Rockefeller, Jr., as Mr. Taplin did not insist on his request after other witnesses had cleared up the apparent discrepancy which existed in the record for a time between the testimony of representatives of the three trunk lines that they had bought prior lien stock of the Wheeling company from Mr. Rockefeller and that of Mr. Van Sweringen, at the C. & O. hearing, regarding his purchases of stock in the company which were later shared with the other roads. It was explained that Mr. Van Sweringen's statement had related to stock other than the prior lien stock and that his purchases had originally been made without the knowledge of the other companies.

Traffic managers of several steel companies were subpoenaed at the request of the Pittsburgh & West Virginia to testify regarding competitive conditions in the territory involved and the possibility of diversion of freight from the Pittsburgh & West Virginia to the Wheeling. John M. Morris, traffic manager of the National Tube Company, told of using routes including the P. & W. Va., Pittsburgh & Lake Erie and W. & L. E. for shipments on which time is an important factor because of the quicker service available to certain destinations and was asked if he had not been solicited by the Wheeling, since the acquisition of its stock by the trunk lines, to route freight over it and the B. & O. to Baltimore, "running around" the P. & W. Va. He declined to answer unless required to do so and Mr. Taplin said that if he had answered he would have answered in the affirmative, but Mr. Taplin declined to say who had solicited the witness. Mr. Morris was also questioned regarding a time when he found some of his shipments being delayed as much as 17 hours in arrival at St. Louis because of a delay of an hour or so in switching on the W. & L. E., which caused them to miss a connection. He said that after a conference with representatives of the lines making up the route the situation had been remedied but Mr. Taplin pointed to the instance as showing the possible effect of a slight delay on the Wheeling.

Traffic officers of the various roads affected also testified at length regarding the competitive conditions. C. J. Brister, assistant vice-president of the New York Central Lines, said that while theoretically there is competition between the New York Central and the W. & L. E., when consideration is given to the fact that shippers route most of the freight he was of the opinion that competition would not be substantially reduced if the New York Central is given a voice in the management. O. S. Lewis, freight traffic manager of the B. & O. said that that company had made arrangements for through routes and rates via the Wheeling and P. & W. Va. W. C. Maxwell, vice-president in charge of traffic of the Wabash, testified in opposition to the application, saying that control of the W. & L. E. by the three trunk lines would tend to break up established routes via that line and the P. & W. Va. and the Wabash, which were formerly parts of the Gould system.

The Convention Group in Front of the Native Sons Auditorium

Superintendents' Association Meets at San Francisco

Convention largely attended—Practical reports and unusually active discussion feature program

THE thirty-fourth annual convention of the American Association of Railroad Superintendents, which was held in San Francisco, Cal., on June 21-24, established new records for that organization in attendance, in interest and in the value of the information contained in the reports and the discussion. More than 250 members were present, forming with the members of their families a group of more than 500 persons. More than 350 persons left St. Louis, Mo., on June 17 for the convention on a special train of 16 cars provided by the Missouri Pacific, the Denver & Rio Grande Western and the Western Pacific, reaching San Francisco on Monday evening. Following the close of the convention the Southern Pacific provided a special train for a party from San Francisco to Los Angeles, Sunday, June 26.

The officers who have directed the work of the association during the past year include as president, E. H. Harman, assistant to general manager, Terminal Railroad Association of St. Louis; first vice-president, E. P. Laird, district superintendent, Atlantic Coast Line, Richmond, Va.; second vice-president, C. L. Harris, division superintendent, Canadian National Railways, Hornepayne, Ont.; third vice-president, George J. Shreeve, general superintendent, Belt Railway, Chicago; and secretary-treasurer, J. Rothschild, of St. Louis, Mo.

In addition to the reports of nine committees, the program was featured by a number of addresses on subjects pertinent to the work of operating officers. Special attention was given to signalling as an aid to operation. In addition to the papers and addresses which appear in abstract in this article, B. H. Mann, consulting signal engineer, Missouri Pacific, spoke on the Acceleration of Freight Trains on Single Track, basing his address largely on the results which have been secured by the Missouri Pacific with its installation of signals, remote control of switches and train control between Leeds, Mo. and Osawatomie, Kan. This paper will be presented in a later issue.

Douglas W. Dodge, Pacific Coast representative of the J. G. Brill Company, presented a comprehensive review of the development of the rail motor car, which will also be abstracted in a later issue.

A voluminous report on the motor bus and motor truck as auxiliary agencies in railway transportation was presented by a special committee, of which M. F. Steinberger, special engineer of the Baltimore & Ohio, was chairman. An abstract of this report and of the discussion which followed its presentation will be published in the July Motor Transport Section of the *Railway Age*.

On Friday morning, Scott F. Ennis, president of the Pacific Fruit Exchange, described the development of the fruit and vegetable traffic of California during the last ten years and emphasized the importance to this industry of adequate transportation service. This traffic has increased from 123,629 cars in 1917 to 256,409 cars in 1926. In addition 30,521,975 cases of canned fruits and vegetables and more than 480,000 tons of dried fruits were shipped from the state last year.

C. H. McDonald, manager of the perishable fruit department, Southern Pacific, described the arrangements his road has made to meet the requirements of this traffic, assembling it at Colton, Cal., and Roseville, for transcontinental movement. At present the Southern Pacific is moving 17,000 cars of cantaloupes from the Imperial Valley, all of which are coming from a 40-mile branch line in a period of six weeks.

Election of Officers

At the concluding session on Friday morning the following officers were elected for the ensuing year: President, J. M. Walsh, division superintendent, Illinois Central, Memphis, Tenn.; first vice-president, T. B. Wilson, vice-president and general manager, Southern

Pacific Motor Transport Company, San Francisco, Cal.; second vice-president, J. K. Savage, general superintendent, Canadian Pacific, Montreal, Que.; third vice-president, F. M. Brown, division superintendent, Pittsburgh & Lake Erie, Pittsburgh, Pa.; fourth vice-president, J. J. Franco, general superintendent of transportation, National Railways of Mexico, Mexico City; secretary-treasurer, J. Rothschild, St. Louis, Mo., re-elected. Members of executive committee, J. K. Brown, division superintendent, N. Y. C., Utica, N. Y.; D. D. Webster, trainmaster, L. V., Wilkes-Barre, Pa.; F. E. Hatch, terminal superintendent, I. C., St. Louis, Mo.; C. A. Clements, terminal superintendent, M. P., St. Louis, Mo.; J. J. Connelly, division superintendent, C. N. R., Montreal, Que.; G. G. Derby, division superintendent, A. T. & S. F., Chanute, Kan.; and K. R. Vought, division superintendent, Pennsylvania, Terre Haute, Ind.

Memphis, Tenn., was chosen as the location for the next convention.

President Harman's Address

President Harman reviewed the progress of the Association during the three years he had served in that capacity. The membership has increased from 1,297 to 2,075, or 60 per cent, 545 members being received during the last year. He also dwelt at some length on the broader phases of a superintendent's activities, speaking in part as follows:

Since operating officers have frequent occasion to come in contact with employees, both individually and in conference, I stress, as one of the operating officer's outside activities, the importance of keeping ourselves better informed on the wages paid in other industries in our territory, the part of the earnings of a railroad that are paid out for wages, fuel, materials, taxes, interest, etc. In short, we should prepare ourselves to show the employees that to pay them higher wages they must assist in increasing the efficiency and economy in operation, and in promoting a friendly and favorable public sentiment.

In 1906 our railway plants represented an investment of about $8,000 for each person employed, while they now represent an investment of about $13,000 for each person employed, an increase of $5,000 per employee or more than 60 per cent. In recent wage controversies some of the employees have insisted upon advances in wages upon the ground of "increased productive efficiency." Of course, the average amount of transportation produced per employee should be greater with a plant that has cost $13,000 per employee than with a plant that has cost only $8,000 per employee. But the employees did not furnish this additional $5,000 of capital that has made it possible to so greatly increase the efficiency of railway operation. It has been furnished by those who have bought the bonds and stocks of the railways. The employees and the public, however, have received most of the benefits resulting from its investment, because it has been the savings in labor, fuel and materials effected by this investment of capital that have made it possible for the railways to increase the average wage paid to each employee 177 per cent annually, while increasing the average rates charged the public only 47 per cent.

It is evident that the future of the railways is mainly in the hands of their employees and the public, and that we should spare no reasonable effort to educate them to a realization of the fact that it is short-sighted policy for them constantly to insist on wages and rates that do not leave the railways a sufficient margin of net earnings so that they may continue constantly a program of enlarging and improving their facilities. It is the capital invested in the railways that makes possible high wages, low rates and good service, and if wages are constantly kept so high and rates so low that adequate net earnings cannot be made and adequate capital raised, the inevitable result in the long run will be actually to keep down the average wage they can pay their employees and to keep up the average rates they must charge travelers and shippers.

R. H. Aishton Outlines Problems

R. H. Aishton, president of the American Railway Association, spoke at the opening session of the convention in part as follows:

You are to consider freight car terminal delays and the remedies and the methods for increasing the daily average mileage of freight cars, and also the handling of a continually increasing business without increasing the number of cars. Both of these reports go to the heart of the transportation problem in this country. (Mr. Aishton then quoted the concrete suggestions for the more economical use of freight cars contained in the report of the Car Service Division of the American Railway Association to the board of directors on May 26.—See *Railway Age*, June 4, 1927, page 1703.)

Continuing, Mr. Aishton said: This action was not taken hurriedly; it was the result of demonstrated performance for the past four years, backed up by the judgment of the railroad executives of this country; that is the program; the performance is in your hands. The entire success of any program adopted by the executives will always be measured by the extent of the superintendent's active participation.

Your committee has made some studies of loss and damage claims. While it is true that there has been a reduction in claims from $119,000,000 in 1920 to $38,000,000 in 1926, and while it is also true that for nearly every item in the list there has been a decided downward trend through those years, on the one item of rough handling and loss caused by rough handling, that trend is not evident. In 1914 the claims for rough handling totaled $11,000,000; in 1920 they had risen to $35,000,000. If you will specialize on this question of rough handling, and if you will place in the mind of every employee on each one of your divisions exactly

what this rough handling is causing and give them some suggestions and enlist their support in reducing the amount, there is no question in my mind that you will get the answer to that also.

While you are doing this, you might also dwell on the question of safety. The safety division of the American Railway Association is endeavoring to effect a reduction in the number of accidents to employees of thirty-five per cent by 1930.

I have only one more thought to leave with you. We have just passed six years of the greatest advancement in efficiency the railroads have ever known. We have seen an adverse, and in some cases hostile, attitude of the public we serve changed to one of a desire to be helpful through an appreciation on their part of the splendid service offered; and, because they have been given an opportunity to see all the cards face up on the table.

Everybody is singing what a good fellow you are; that is just the time to look out. There is a text in the Bible that reads like this: "Beware of the day when all men speak well of thee." When everything is all right, that is always the dangerous time. Go to it harder than ever, that is my advice, to develop new methods; new ways, and better understandings of those things that produce safety, more efficient and adequate service for the public, and greater economies, not only for the public, but for your own organizations.

Hump Versus Flat Yards

A committee of which F. E. Hatch, terminal superintendent, Illinois Central, East St. Louis, Ill., was chairman, presented the following report on hump versus flat yards:

The desirability of converting a flat yard into a hump yard depends upon the number of cars handled and the number of classifications or separations per hundred cars. Other things being equal, a double hump yard is justified when the volume of business equals 800 cars in each direction daily and the ratio of classification is equal to or greater than 1 in 5, or 20 separations per 100 cars handled.

While the train arrival frequency is a factor in justifying a hump yard, the volume of business and the ratio of classification are much more important. A hump yard is desirable when the train arrival frequency over any part of the 24 hours is such that business cannot be handled currently in a flat yard with satisfactory promptness. A hump yard can hardly be justified, however, unless the volume of business and the ratio of classification substantially equals that outlined above.

As a rule, where it is necessary to make 20 or more classifications at a given point, the construction of a hump yard should be given consideration.

Where trains are received with pre-classified consists as at junction yards where pick-ups and set-outs are made or pre-classified consists are combined, a hump yard is not economical. If the volume of special-dispatch service is sufficient, consideration should be given to the installation of a special hump to take care of such business or the receiving yard should be so designed as to permit the quick classification and separation of this business in this yard, eliminating the necessity of sending it over the hump.

The number of cars humped with one or two engines depends upon the tractive effort of the engines, the grade of the hump approach, weather conditions, whether the majority of the cars are loaded or empty and the yard design. Under average conditions one engine should handle from 50 to 75 cars per hour. The use of more than two engines, exclusive of trimmer engines, is seldom justified on one hump.

Where hump yards are justified, economies are accomplished by: (1) Increasing the number of cars handled per engine hour, thereby requiring the use of fewer locomotives; (2) advancing the movement of cars, resulting in improved service and saving in per diem; (3) reducing the damage to equipment and lading, thereby decreasing claim payments; and (4) reducing the time necessary for weighing operations.

Further savings can be made by the installation of car retarders and the elimination of car riders, namely: (1) Decreasing wages; (2) reducing robberies—the flood lighting system which must necessarily be installed with car retarders, and the fact that there are fewer employees in the yard, permit the more ready detection of unauthorized persons on the railroad property; (3) decreasing the number of personal injuries; (4) enabling continuous operation of the hump, there being no necessity of waiting for riders; thereby increasing the number of cars handled per engine hour, reducing the number of locomotives used, and expediting the handling of cars; (5) insuring safer handling of cars on humps due to the elimination of the hazard of defective brakes, which in non-retarder yards occasionally results in damage to equipment and personal injuries.

Discussion

G. J. Shreeve, general superintendent, Belt Railway of Chicago, stated that the records at Clearing Yard show the damage to be far less in hump than in flat yards, as described in the *Railway Age* of June 4, page 1691. There has not been a case where cars containing shock recorders showed rough handling when going over the hump.

R. S. Richardson, division superintendent, C. N. R., stated that as a result of the more thorough inspection of brakes he had found it possible to eliminate the use of skates after cars go over the hump. Mr. Shreeve and others opposed this practice because of the fact that many things can occur after a car goes over the hump which require their use.

F. E. Hatch, terminal superintendent, I. C., emphasized the accuracy of the car retarder, stating that when an accident occurs now, it is a man-failure. He has had no personal injuries in yard forces since the retarder installation at E. St. Louis, Ill., was placed in service and has cut the cost of handling cars over the hump 40 per cent and released five large switching locomotives. He puts cars over the hump at the rate of 125 per hour. The installation of the retarders has greatly simplified the labor problem. The retarder towers are manned by switchmen and if a man lets three cars go wrong in a week, he is taken out of the tower. This terminal handles 2,600 cars (counting twice) per day. It was rebuilt in 1926 at a cost of $1,900,000, of which $300,000 went for the retarders.

Operating Trains Against the Current of Traffic

A committee, of which C. A. Mitchell, superintendent, New York, New Haven & Hartford, was chairman, reported on operating trains against the current of traffic as follows:

The committee reaffirmed its former recommendation, namely: "It is the recommendation of this committee that where the movements are fully protected by proper signaling devices, full utilization of track systems should be taken advantage of, and in the absence of such devices such operations should be conducted by the use of train orders."

This committee recommended that where the traffic density on single tracks warrants the expense of installing a suitable signal system, trains should be operated by signal indication without train orders.

The committee also renewed the recommendation presented at the 1926 convention that train rules 14-L and D 14-L be revised to call for two long, one short and one long sound of the whistle at highway crossings.

Discussion

S. H. Shultz, train rules' examiner, C. B. & Q., stated that his road operates trains with the current of traffic on double track by signal indication and also against the current of traffic by signal indication on part of its lines and by train order on the rest, as standard practice. Where adequate signal facilities exist, that road does not hesitate to run trains in either direction by

signal indication. C. L. Harris, division superintendent, C. N. R., and others, advocated the exclusive use of the No. 19 order, maintaining that the No. 31 order adds nothing to safety.

The recommendations of the committee were approved.

Why Written Train Orders?

By F. L. Dodgson

Consulting Engineer, General Railway Signal Co., Rochester, N. Y.

We can say without fear of contradiction that the automatic block signal system, when installed with modern methods and modern materials and properly maintained, is the most dependable device ever designed by man. One failure in 100,000 operations is not uncommon. The average is better than one in 60,000. And these are stop failures. Clear failures occur today with a frequency of something like one in six or eight million operations.

But, how about the man? Can we depend upon the engineer to observe and obey these signals? Evidently the Interstate Commerce Commission thought that enginemen could not be depended upon to observe and obey signals. Without expressing any opinion as to the necessity for, or the desirability of, that much-discussed train control order, I want to say that I have not yet lost faith in the American locomotive engineer.

It may be that my faith is strengthened somewhat by the knowledge that most of the signals upon which we must depend for safety in a dispatching system are necessarily signals which govern opposing train movements.

What do we need to build up a system for moving trains by signal indications?

(1) We need, it is evident, a complete system of automatic block signals; also, it is evident, if we are to expect the same dependability and reliability that signals have given in the past, that we should use only those devices and methods which have been thoroughly tried out in the signal field.

(2) In order to control all train movements by signal indications, all signals and all switches which govern the movement of trains into, out of, and by passing tracks should be controlled from a central point. These signals should, of course, be part of the automatic block system. For the same reason the switches should be so guarded that they cannot be moved at the wrong time.

(3) In order that the operator, or the dispatcher, can direct the trains properly, means must be added to the system for indicating at the central point the positions of all trains at all times. In other words, the OS-ing should be accurate and plentiful.

(4) Practical means must be added for affording entrance to passing tracks, particularly on single track, which must be used for switching purposes.

(5) Snow, ice and other conditions sometimes interfere with the proper movement of switches; therefore, means must be added to the system to deal with this situation practically.

All of these requirements should be, and can be, met with well tried out signal materials.

If, in designing a dispatching system, we let the signal indicate the position of the switch, which as a last resort it does anyhow, and then provide electrical means at the switch for preventing the movement of the switch while the signal indicates proceed, or while a train is approaching or passing over the switch, we have done all that is necessary for the safe operation of that switch. By doing this we have done away with the necessity for sequence of lever movements, have greatly reduced the number of levers required, and also have so greatly reduced the number of line wires required that the cost of an installation is well within reason.

It is, therefore, possible to operate switches located at considerable distances from the operator. It is possible to indicate to the operator the positions of trains relative to the switches. It is possible to so control the signals that trains can be told by their indications when and where to go. It is possible to so regulate the control of both signals and switches that trains cannot be told to go at the wrong time or told to go to the wrong place. All of this can be done without excessive cost and, what is more important, it can be done by using only those materials, devices and methods that have already been developed for, and their dependability proven in the railway signaling field.

The tools and materials needed to install a dispatching system, by which trains can be operated successfully and safely without written train orders, are at hand. No development is necessary. That has already been done. Also there are men available in your own organization whose training and experienct have been such that they are thoroughly capable of taking these tools and materials and with them building a system for dispatching trains that will have all the dependability, all the reliability and all the safety found in the system under which you are now operating. The only new thing needed will be rules; not a lot of new rules; but the elimination of a lot of old ones. That will be your job.

There are many advantages of such a dispatching system. If the location of all trains is accurately known at all times, and orders or directions can be given to them when and where desired, or orders or directions already given can be changed at will, not only can the capacity of the line be greatly increased, but train delays can be eliminated. Train delays eliminated means train road hours saved and train road hours, particularly freight train hours, means money. All of the so-called "out of pocket" costs of train operation are effected by this time-saving method. Crew wages (if there is overtime), fuel, water and lubricants come under this head. Also as this saving in time is largely due to eliminating freight train stops, there is a very substantial saving to be had in the item of equipment repairs. There will be a reduction in the number of engines required to do the work, as well as a saving in car per diem. All of this is in addition to the saving in telegraph operators pay rolls brought about because these men will no longer be needed to transmit train orders. Eliminating freight train stops which are made to open or close passing track switches may, if grade conditions are right, lead to an increase in tonnage rating and increasing the tonnage rating even a small percentage, without adding overtime, producers a marked decrease in the cost per ton mile of moving freight.

Dispatcher Controlled Signal System

By H. W. Griffin

Consulting Engineer, Union Switch and Signal Co., Swissvale, Pa.

The slogans "Keep trains moving" and "Why stop a train to tell it to proceed" have been emphasized in the railroad world for years, but few roads, and then only in comparatively small stretches of territory, have availed themselves of the apparatus and systems which have been developed to "Keep trains moving by signal indication." A system which has been in the course of development and perfection for some time, but only recently offered to the railroads, will eliminate practically all the delays experienced in the meeting and passing of trains. It has been called the "Dispatcher Controlled Signal System." It makes possible the direct control of as many switches as may be desirable and will probably be limited to those effecting passes and meets.

It appears necessary in the new system of handling trains by signal indication to control all outgoing signals at one siding to the next siding by opposing trains and provide intermediate signals to secure a shorter headway for following trains. The elimination of many operators will represent one of the principal tangible savings in operating costs, effected by the system.

It is proposed to retain all of the automatic track circuit control, superimposing dispatcher control so that he may select the direction of traffic, with the added feature of insuring that the clearing of the outgoing signal at one siding indicates that the opposing signal at the next siding for the same block is positively held in the stop position, not only through his control board but during passage of a train through the territory. Likewise, the two signals governing through the limits of the main track at a siding will be inter-controlled.

Briefly, the system will include a control board having switch levers, signal levers, track indicators and signal repeaters; passing siding switches, power operated or hand operated; and signals governing all movements over them. Where the switch is hand operated, it is proposed to use "Take Siding" and "Leave Siding" signals indicating authority to throw the switch, which will be followed by a display of the proper signal indication. Telephones should be provided at both ends of each siding to permit train crews to communicate with the dispatcher as required by special train movements.

A feature of the system is an automatic train graph. This instrument automatically and accurately records the passing of trains at each end of all passing sidings and at any other points desired. It provides a permanent record of all train movements throughout the entire territory involved in the system. When dispensing with the local operator, the use of some reliable and dependable record of time at which trains pass certain definite locations along the road appears necessary.

A highly important feature of the system is the ability of the dispatcher to stop trains approaching the ends of passing sidings, this being accomplished by his direct control over all signals.

The same system of signal aspects and type of signaling as

now in use on any road can be continued in combination with the dispatcher controlled signal system. It is, however, altogether probable that a few new signal aspects will be found desirable because of the possibilities of operation opened up by this system. Power operation of the passing siding switches appears highly desirable and justified by the reduction in train stops. It is to be understood, however, that the system does not require all such switches to be power-operated and that it may be applied to situations where the switches are ground operated by the train crews. Remotely controlled power operated switches have been in service for some years and present no problem in application, operation or maintenance.

Report on Greater Car Utilization

The report on greater car utilization was prepared by a committee of which C. E. Brower, superintendent of transportation, Atlanta, Birmingham & Coast, was chairman. Among the recommendations were the following:

There are two ways of handling an increased business without additional cars, viz: increased tons per car and increased miles per car per day. Twenty-five per cent of the cars in the country are carrying merchandise and 38 per cent are carrying miscellaneous freight; therefore, 63 per cent of our cars are only carrying about 50 per cent of their rated capacity.

To increase the average tons per car will require the closest co-operation between the shippers and the carriers, with the exception that the merchandise car tonnage rests almost entirely in the hands of the carriers, and this service alone provides a fertile field of endeavor.

Shippers of miscellaneous freight should be urged to order no more cars than they can reasonably expect to load within the 24-hour period. In placing orders for cars, they should be explicit in stipulating the kind and capacity of car desired, and the character and destination of the load to be placed therein, and a reasonable time should be allowed the carrier in which to supply a suitable car. Car distributors should endeavor to fit the car to the load.

Better unloading facilities should be provided by shippers of heavy commodities, such as coal, sand, crushed stone, etc. Suitable trestles, with bins underneath, afford an opportunity to utilize drop bottom cars, which can be unloaded in a few minutes, instead of hours or days, enabling the cars to be returned to service, and be available for loading in hours instead of days.

Concerted action should be taken to curb or to eliminate the growing practice of shippers using cars for warehouse purposes.

Traffic department representatives having jurisdiction over the diversion and reconsignment of cars are in a position to assist very materially in increasing the miles per car per day by placing orders for diversion or reconsignment promptly at the proper point and, whenever possible, ahead of the car.

There is a marked lack of co-operation between the mechanical and operating departments in the handling of bad-order cars. To a car inspector a bad order car is just a bad order car, and he is not concerned with any other phase of railroad operation. This results in many cars being sent to repair tracks and delayed 24 hours or more when a few minutes' work would permit the car to run through to destination. Many railroads find it desirable and economical to keep a light repairman in classification yards to make minor repairs and keep cars moving. It is to be deplored that during dull times when a reduction in force is necessary these light repairmen are among the first to be cut off.

The common practice of switching repair tracks only at night results in a loss of car miles and tends to reduce the available car supply. Much can be done toward more prompt movement of cars by setting aside a track on which cars requiring minor repairs, which can not be made by the light repairman in the classification yard, may be repaired promptly and which may be switched out when repaired and forwarded to destination. Co-operation between yardmasters and car foremen in this particular is most essential and will bring about good results. There is no more important work for a switching engine than that of keeping bad order cars moved promptly to the repair track, and when repaired moved back to the train yard and lined up for movement.

Discussion

Many members commented on the growing abuse of shippers using cars as warehouses, particularly in the handling of unbilled lumber, coal and similar products. This abuse is apparently most prevalent in highly competitive areas and is more pronounced when superintendents and other operating officers themselves take an interest in the solicitation of traffic. After extended discussion and a citation of numerous instances of the abuse of existing regulations, the report was finally adopted and referred to the American Railway Association for consideration.

Safety

L. H. Collett, supervisor, safety department, A. T. & S. F., Los Angeles, California, emphasized the importance of the division superintendent as a key-man in a safety organization and urged his insistence upon complete observance of all rules and instructions by supervisory officers, as well as employees.

A paper presented before the National Safety Council at Detroit, Mich., on October 27, 1926, by Victor Parvin, superintendent, Ann Arbor Railroad, as a representative of the Superintendents' Association, was also read.

Increasing the Average Miles Per Car Per Day

This subject of increasing the average miles per car per day was assigned to a committee of which J. J. Connelly, superintendent, Canadian National, was chairman, who presented a report of which the following is an abstract:

The committee is of the opinion that the freight car spends too much of its time in terminals. Agents should work closely with shippers and receivers to persuade them to load and unload cars quickly. They should also encourage capacity loading of cars and endeavor to work to a loading schedule suitable for the train service available, to the end that cars may be moved from their initial station, if possible, on the day on which they are loaded.

Agents, when signing bills of lading covering shipments to terminal points, should insist upon consignee's street address being given, and, where possible, the name or number of the delivery track to facilitate placement. Agents should report promptly all cars for movement, accompanying each car by proper waybills, customs papers, home route cards and other necessary documents; when several documents are necessary with one car, all should be firmly fastened together to prevent delay at terminals, customs ports, or destination. Agents should maintain such standards of car inspection as will insure a car passing interchange inspection, thus avoiding the transfer of lading at an interchange point, which, in no small measure, is responsible today for lost car motion.

Much lost car motion occurs in the mechanical inspection of equipment. A material saving of time could be effected, provided all concerned could agree upon the establishment of local inspection bureaus which could handle this operation without prejudice to any road concerned, and meet all requirements by one inspection.

Cars should be picked up at the initial station promptly and regularly, and the consists of trains wired to terminals. The consists should reflect the make-up of the trains so that the terminals may anticipate the amount of switching necessary. The arrival of trains should be anticipated in the terminal yards to insure proper reception. They should be inspected promptly and thoroughly, switched if necessary, and "cripples" placed on the repair track without delay. In adding cars at terminal yards en route, the proper classification should be maintained on both fast freight and main tracks. Cars should not be held too long in terminal yards for solid destination trains or certain classifications, but the tracks should be doubled over the classifications blocked in trains and forwarded to the next terminal to accelerate movement.

To sacrifice prompt movement of cars for the purpose of economizing in power costs is an unwise policy. Constant supervision of car handling at large terminals is necessary to stimulate car movements. A live car distributor is necessary to efficient car handling. He should check the reports constantly for violation of car orders, which should be brought to the attention of the superintendent to place responsibility and take the necessary remedial action. The inspection in terminal yards should

be most thorough in order to reduce to a minimum delays to cars in transit.

"Cripple" tracks should be checked twice daily to see that loaded cars, particularly, are being repaired with all possible haste, and placed in line for prompt movement. They should also be switched promptly and should be conveniently located off or adjacent to switching leads to avoid unnecessary handling of "cripple" cars. Nothing interferes so much with switching operations as "cripple" cars, and one operation in placing the car safely in line for the "cripple" track speeds up the general work and at once removes a menace.

Discussion

F. W. Kelsey, division superintendent, N. C. & St. L., stated that it had been possible to standardize the switching in a large city on his lines where four roads competed actively for business, by lining up a schedule with each industry to give the adequate service.

The report was accepted and the members present pledged themselves to endeavor to put the recommendations of the Committee into effect.

Report on Unnecessary Transfer of Cars

A committee, of which A. G. Peck, general agent, Missouri-Kansas-Texas, Kansas City, Mo., was chairman, reported on two subjects: the unnecessary transfer of cars and the desirability of a uniform transfer charge. Their report was, in part, as follows:

Reduction of Transfers

This committee has not found a single terminal point that has not shown a marked improvement in eliminating the transfer of cars at interchange points.

It outlined some of the methods that have been adopted to secure these results, and recommended the adoption of some or all of these, at every point where there is a joint interchange inspector, or arbitrator.

First: We reiterate our recommendation at the 1926 meeting: "We recommend as a positive rule that transferring must be done by the car department, our reasons being that if the foreman of the car department has to spend his company's money to transfer a car for which he will get no return, he will spend a portion of that money (and sometimes make a saving) in repairing the car, because he will often be able to make a profit thereon, as he can, under the rules, charge the expense of the repairs to the car owner."

Second: The information secured by these inevstigations shows that important savings have already been made and it is suggested, first, that terminals may secure further temporary improvement (but with the idea of adopting it only as temporary relief, until the adoption either locally or nationally of our third recommendation) from the following plan:

If line *A* delivers line *B* a car at terminal *X*, which has defects on which a transfer might be secured under A. R. A. rules, but line *B* considers it safe and runs the car, the destination being beyond another junction on its line, and when the car is offered to line *C* at station *Z*, and line *C* insists on a transfer, and the record for which the transfer is asked is the same as was taken by line *B* at terminal *X*, line *A* will protect line *B*, and furnish a transfer order to offset the expense of line *B* to line *C*. This arrangement is in effect between some of the lines at two or three of the large centers, and has had a splendid effect at certain terminals, especially at St. Louis, where it has reduced expense and claims very materially.

The ideal plan which will get results for all time, and the one which the members of the committee present at a meeting on April 2 unanimously recommended, is covered by rule 24 and article VII of the constitution of the Chicago Car Interchange Bureau, which are quoted below:

"Rule 24. Loads must not be transferred from cars at the expense of the delivering line, if the car is in sufficiently good condition for safe handling and proper protection of load, or if defects can be repaired under the load, without regard to the question as to disposition of the car, after being unloaded at its destination."

"Article VII. The chief interchange inspector shall, under the direction of the Interchange committee, have full charge of all matters pertaining to the operation of the bureau.

"The assistant chief interchange inspector and district assistant interchange inspectors shall, under the direction of the chief interchange inspector, have full authority in all matters pertaining to the interchange of cars, within the districts under the jurisdiction of the bureau.

"Appeals from the decisions of the chief interchange inspector's assistants may be made to the chief interchange inspector."

We recommend the adoption of this practice at all points where a chief interchange inspector or arbitrator is employed, and ask the association to endorse and recommend its adoption by the mechanical section, A. R. A.

A Flat Rate for Transfers

With regard to the advisability of establishing flat per car rates in large terminals for the transferring and adjustment of loads, we find that the conditions and arrangements at the various interchanged points are varied.

We know of several places where a flat rate was adopted that brought forth gross inequalities; that is, the line having the low-grade commodities to transfer would do so at a nice profit, especially where the work was done by contract, whereas the line having the high-grade commodities to transfer had to do it at a loss. Your committee, however, recognizes, on the other hand, that there is a material saving in clerical, bookkeeping and supervisory expense in favor of some kind of flat or per car rates over the classified per ton commodity rates, and we recommend that a study be made by a special committee at each terminal, of the comparative actual cost of transferring various commodities. The various commodities should then be separated into about three groups to see if a flat rate for each of these groups can not be worked out.

Discussion

It was evident from the discussion that those present were unanimous in supporting the report of the committee regarding the curtailment in the number of cars to be transferred. The portion of the report relating to the reduction of transfers was approved with the recommendation that it be sent to the Mechanical Section, A. R. A., with the endorsement of the superintendents' association.

Employee Co-operation in Freight Claim Prevention

A report was presented by a committee on freight claim prevention, of which A. J. Connolly, superintendent, Union Freight Railroad, Boston, Mass., was chairman; an abstract follows:

It is the usual practice to hold general freight claim prevention meetings semi-annually or annually, the frequency varying on different lines, and attended by general, divisional and supervisory officers. A general manager, assistant general manager or general superintendent acts as chairman.

Division meetings are held monthly or bi-monthly, presided over by a division superintendent and attended by the division claim agent or the general freight claim agent, and by division employees, including general yardmasters, yardmasters, car foreman, supervising agents, clerks, switchmen, conductors, engineers, brakemen, firemen, etc. At these meetings statements prepared by the freight claim department are analyzed, particular attention being given to the losses for which the division is responsible. Preventive measures are discussed and adopted and arrangements are made to have the individuals responsible for losses interviewed.

Monthly statements are prepared and distributed by the freight claim departments, from which bulletins are prepared and distributed to outlying points and posted on bulletin boards and in other conspicuous places in the larger terminals. In addition to the figures, these bulletins contain suggestions and instructions tending toward the elimination of the principal causes.

Report on Rail Motor Car Operation

C. Forrester, superintendent, Canadian National, London, Ont., was chairman of the committee on rail motor car operation. The following report was presented:

We do not consider that the proper place for the rail motor car is in main line service, except on such lines as are doing a light passenger business and a heavy freight business.

We consider the place for the rail motor car is in branch line service where steam trains are being operated at a small margin of profit, if not at an actual loss. A rail motor car which can be operated more cheaply, requiring two or not more than three men and with much less expense for fuel and wages, can take care of the business on many branch lines and in many cases can turn an operating deficit into a profit.

It has been suggested by some members of the committee that more frequent service of this type of car on branch lines might result in additional business for the railway and thus reduce the bus competition which now exists in many sections of the country to a great extent along those lines.

C. N. R. Experience with Motor Rail Cars

The extensive experience of the Canadian National with motor rail cars was presented as a discussion of this report in a further paper by H. C. Rochester, office assistant to the operating vice-president of that road, which is in part as follows:

The Canadian National is now operating motor rail cars propelled by direct-drive gasoline engines, by electricity from a storage battery under each car that is charged at terminals, by electricity supplied by generators operated by gasoline engines, and by electricity supplied by a generator operated by an oil engine. Motor rail car mileage on the Canadian National has increased from slightly less than 188,000 in 1923, to over 1,112,000 in 1926. Additional coaches are being placed in service this year.

Generally speaking, the gasoline and storage battery motor coaches have served very useful purposes by permitting reductions in expenses or the furnishing of more passenger, milk and express service than could have been feasible with steam trains. Differences that might be mentioned are that whereas the battery cars involve higher initial expenditure and expensive renewal of batteries after some years of operation, their reliability of service is noteworthy and their maintenance expense is relatively low.

The storage battery coaches run very smoothly, but do not attain high speeds. The earlier gasoline driven motor coaches gave considerable trouble due to mechanical failures, but these difficulties have been largely overcome in later built cars. As compared with battery cars, their initial cost is lower but maintenance expense is generally higher. Our experience has shown that each has its own particular field for operation, as naturally battery cars can only be used where electric power is available to operate a motor generator charging set at one end of a short run or at each end of a long run, but as they have double-end control, they need not be turned to move in the reverse direction, whereas gasoline coaches do not depend on any electric power supply but can be operated only from one end and therefore require to be turned at each end of their runs.

A gasoline electric motor rail car, built by the Electric Motive Company of Cleveland, equipped with a Winton six-cylinder engine driving a 110 E.W. generator to provide electric current for propulsion is giving good service on one of our Michigan lines. This car has seats for 32 passengers, a baggage compartment and a mail compartment. It is a complete train in itself. Good results are also being obtained from the operation of other gasoline electric motor coaches that were equipped in our own shops, and some built by the J. G. Brill Co.

With respect to the direct drive gasoline as compared with gasoline electric coaches, our experience has been that whereas the straight gasoline engined car is suitable for light traffic runs, it has power limitations beyond which it is advisable to have the more powerful car with electric transmission.

Our latest development is the electric transmission of power from a special type of internal combustion oil engine, using for fuel a relatively inexpensive semi-refined crude oil The cost of this fuel oil is so much less than gasoline and the amount of power produced so much greater, that more efficient operation and greater extended and general uses have been attained. We estimate that the cost of fuel for the oil-electric cars is less than 25 per cent of that of gasoline for the development of similar power. Two years ago two different sizes of these units were built—seven 60 ft. coaches with four-cylinder engines, and two sets of articulated coaches, 102 ft. long, equipped with eight-cylinder engines. This summer we are adding five 73 ft. 9 in. coaches having six-cylinder engines. The articulated sets are practically two car bodies carried on three trucks, without vestibules or platform between, passage being direct from one car body to the other. The four-cylinder coaches seat 57 passengers, the eight-cylinder articulated cars 126 passengers and the six-cylinder coaches are planned with seating capacity for from 37 to 57 passengers, besides which each type has suitable space for baggage and express. With the six-cylinder coaches it is intended usually to haul one or two trailers, each trailer seating 65 passengers.

In November, 1925, one of our four-cylinder oil-electric cars that was being sent West for service in British Columbia, crossed the continent from an Atlantic port to a Pacific port in one continuous run. It was operated from Montreal, Quebec, to Vancouver, B. C., a distance of 2,924 miles, in 72 hours elapsed time, or 67 hours actual running time. The oil engine was not stopped at any time en route, except for 18 minutes to replace an atomizer. The total mileage of that run, divided by the elapsed time, shows an average speed of 40.6 miles per hour.

Our present oil electric motor coaches are performing satisfactorily with few failures on runs totaling from 128 to 350 miles per day. The territory in which they are operated extends from Nova Scotia, on the Atlantic seaboard, to Alberta. One was operated in British Columbia for a few months until the business became too heavy, requiring the operation of steam train service. Trailers are hauled by some of these oil electric coaches on runs where the passenger, baggage or express business requires more accomodation than there is in the motor coach. Some of these trailers were built especially for the purpose, others are remodeled steam train coaches. Practically all have self-aligning roller bearing trucks.

SUMMARY.

Our experience confirms the general view that is held as to the advantages and uses of motor coaches, which might be summarized as follows:

1. To give frequent passenger service on sparsely settled branch lines, or on parts of main lines adjacent to market towns.
2. To connect junction points on important main lines with the towns or cities situated within a few miles of the main line.
3. To give a group of towns a frequent connecting service over and above through trains.
4. To connect small summer resorts, golf clubs, etc., with branch or main line service.
5. To handle milk of a limited amount to a distributing or connecting point.
6. To provide service to small suburbs.
7. To move workmen to and from shops or factories at a distance from a city.

Discussion

A. E. O'Dea, supervisor of transportation, L. V., took exception to the implication of the committee that Motor rail cars are adapted primarily for branch line service, describing the extensive use of this equipment in main line service on his road for handling both passenger and milk traffic.

M. F. Steinberger, assistant to vice-president, B. & O., described an experiment on that road whereby a rail motor car was installed to compete with a motor bus without success, for it afforded only the same frequency of service as the train which it replaced. From this experiment he emphasized the importance of frequency of service in the development of passenger traffic and concluded that the rail motor car cannot be considered a competitor of the motor bus.

Slow Freight Tonnage Rating

An abstract of a report on methods of determining the most economical trainload for a given district or division, presented by H. F. Milligan, division superintendent, C. C. C. & St. L., follows:

There are few problems which division operating officers continually have to face that are more important or have a greater bearing on the costs of train operation than the question of proper tonnage rating for freight locomotives.

We are now in possession of sufficient test data to be enabled to determine scientifically the maximum train load which any particular locomotive can handle at a given speed over any conditions of grade and curve. The process resolves itself into the determination of the pull which the locomotive will exert at the rear tender drawbar at a given speed and on a given grade, and the summing up of the resistances of cars under the same conditions of grade and speed, until the resistance of the cars is theoretically equal in magnitude to the drawbar pull of the locomotive.

Train resistance varies with speed and also with weight of cars in the train. At any given speed the resistance for each

ton of train weight will be greater if the train is composed of light cars than of heavy cars. A number of roads have apparently failed to recognize this fact for their ratings are still expressed in terms of actual tons of train weight. Some few roads, however, have recognized this variation in resistance of cars of various weights, and express their engine ratings in terms of "equated" or "adjusted" tons. An "equated" or "adjusted" tonnage is the actual tonnage of a train, to which has been added a certain adjustment factor for each car, called the "car factor," to compensate for the variations in resistance between heavy and light cars.

Dynamometer tests produce the most reliable data upon which to establish tonnage ratings, but unfortunately all roads are not equipped with the facilities necessary to make such tests. In the absence of such facilities certain methods of calculating the data must be relied upon. A number of formulas have been evolved which enable us to determine train resistance where a dynamometer car is not available, and one which has been found to give fairly accurate results where a considerable variation in class and weight of freight cars is encountered is used herein to illustrate this method of calculating a rating.

Let us consider a car of any given weight, moving at a uniform rate of speed on straight level track, and denote the resistance of this car as "R." Then the magnitude of this resistance, "R," is 2.18 times the weight of the car, in tons, plus 102.5. It follows from this, then, that the total resistance of a train is the sum of the resistances of all cars in that train, or the number of cars in the train multiplied by the resistance of one car. The total resistance of a train is made up of two parts:

1. That due to journal friction, and miscellaneous other resistances due to vibrations, etc. The value of this resistance may be calculated by the use of the above stated formula, when we know the average weight per car. The total resistance of the train is the resistance of one car multiplied by the number of cars in the train.

2. That due to grade and curve resistance. Grade resistance amounts to 20 lb. per ton for each percent of grade. Curve resistance is calculated only for uncompensated curves, and may be expressed in terms of grade resistance. An uncompensated curve of sufficient length to contain the entire train offers a resistance equal to that of a .04 per cent grade for each degree of curvature.

In addition to the above data on car resistance we must know what pull the locomotive to be rated will deliver at the rear tender drawbar under the particular grade and speed conditions to be met. This drawbar pull is the net pull which remains after having duducted from the maximum cylinder tractive effort the resistance of the locomotive and tender. This resistance is made up of the following three parts:

1. Machine friction of such parts as driving wheels and rods, pistons, valves, crossheads, etc., and amounts to 25 lb. per ton weight on drivers.

2. Journal and track resistance of engine and trailer trucks, and tender, which is equivalent to car resistance, or 2.18 times the weight on trucks and tender, plus 102.5.

3. Grade resistance of locomotive and tender, which is 20 lb. per ton of locomotive and tender per per cent grade.

As stated above, the total resistance of a train should equal the drawbar pull of the locomotive. Equating this drawbar pull to the total resistance of the train, and performing the necessary mathematical calculations we produce the formula for adjusted tonnage rating for the locomotive in question. This rating, for any condition of ruling grade, is equal in adjusted tons to the drawbar pull of the locomotive divided by 2.18 plus 20 times the percentage of the ruling grade. The value of the car factor, which is the amount to be added to the actual tonnage to obtain the adjusted tonnage, is 102.5 divided by 2.18 plus 20 times the percentage of the ruling grade. The factor is entirely independent of class of power, speed, or car weight.

As an example of the application of the method outlined let us assume that it is desirable to obtain the adjusted tonnage rating and car factor for a district on which the ruling grade in the tonnage direction is 0.3 per cent, and on which freight trains are handled by U. S. R. A. light Mikado locomotives, and the desired minimum speed on the ruling grade is five miles per hour. These locomotives exert a maximum tractive effort at five miles an hour of 54,700 lb. This is reduced to a drawbar pull of 50,125 lb. at the rear tender drawbar after making proper deductions for machine friction, journal and track resistance of trucks and tender, and grade resistance of locomotive and tender. As previously stated we should equate the drawbar pull to the total resistance of the train. Therefore, the resistance is 50,125 lb., and the adjusted rating on a 0.3 per cent grade is 50,125 divided by 2.18 plus 20 times 0.3, or 6,127 adjusted tons. The car factor is dependent upon the ruling grade, and is 102.5 divided by 2.18 plus 20 times 0.3. The factor, then, is 12.5, but in practice we may use a factor of 13 for it is convenient to omit fractions from the factor. Let us assume that the average car weight in the tonnage direction on the division in question is 70 tons. In building up a train we should consider the "adjusted" car weight; that is, the actual weight plus the car factor, or in this case 70 plus 13, or 83. A train of 6,127 adjusted tons consisting of 70-ton cars, and using the car factor 13, would contain 6,127 divided by 83, or 74 cars. The actual weight of such a train would be 74 times 70, or 5,180 actual tons.

Such a method of determining a slow freight rating theoretically gives fairly accurate results, but wherever possible ratings should be based on dynamometer tests. In view of the fact that local operating or physical conditions on a particular division or district may materially affect a calculated tonnage rating, it is always desirable to analyze these conditions thoroughly and make a series of observation tonnage tests before such a rating is definitely established.

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended June 18 amounted to 1,016,351 cars, a decrease of 20,292 cars as compared with the corresponding week of last year and an increase of 31,768 cars as compared with 1925. Miscellaneous loading showed an increase as compared with the corresponding week of last year of 10,297 cars, but coal loading showed a reduction of 18,797 cars and all other commodity classifications also showed reductions except grain and grain products. The Pocahontas, Southern and Northwestern districts showed increases as compared with last year but the other districts showed decreases. The Summary, as compiled by the Car Service Division of the American Railway Association, including some revision of the figures for previous years, follows:

Revenue Freight Car Loading

Week Ended Saturday, June 18, 1927.

Districts	1927	1926	1925
Eastern	235,581	242,469	234,460
Allegheny	208,495	213,286	201,403
Pocahontas	58,835	57,762	50,694
Southern	149,361	148,142	142,906
Northwestern	162,913	161,549	150,561
Central Western	133,020	139,980	133,107
Southwestern	68,146	73,455	71,452
Total West. Districts	364,079	374,984	355,120
Total all roads	1,016,351	1,036,643	984,583
Commodities			
Grain and grain products	38,566	38,126	35,425
Live stock	25,832	27,186	25,539
Coal	156,046	174,843	155,115
Coke	10,375	11,370	9,347
Forest products	69,402	75,137	71,782
Ore	65,137	68,174	61,616
Mdse. l. c. l.	258,439	259,550	258,221
Miscellaneous	392,554	382,257	367,538
June 18	1,016,351	1,036,643	984,583
June 11	1,028,305	1,052,471	989,873
June 4	911,298	944,864	998,243
May 28	1,026,397	1,080,786	913,087
May 21	1,016,803	1,039,070	987,306
Cumulative total, 25 weeks	24,308,520	23,953,789	23,335,317

The freight car surplus for the period ended June 15 averaged 277,115 cars, including 145,183 box cars and 36,310 coal cars.

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended June 18 totalled 63,939 cars, an increase over the previous week of 1,174 cars and a decrease of 42 cars from the same week last year, in spite of the drop of 2,626 cars in grain loading.

	Total for Canada			Cumulative totals to date	
	June 18	June 11	June 19		
Commodities	1927	1927	1926	1927	1926
Grain and grain products	5,192	4,833	7,818	177,774	170,199
Live stock	1,930	1,854	1,901	47,337	48,082
Coal	7,320	6,795	6,545	151,192	113,559
Coke	281	268	276	7,838	9,866
Lumber	4,471	4,531	4,516	85,219	83,911
Pulpwood	2,282	2,341	2,202	95,867	74,237
Pulp and paper	2,367	2,507	2,422	53,934	61,123
Other forest products	3,344	3,294	3,095	77,507	80,685
Ore	1,988	1,879	1,699	35,895	37,058
Merchandise, l. c. l.	17,792	17,926	16,988	402,847	378,390
Miscellaneous	16,972	16,537	16,519	317,931	307,717
Total cars loaded	63,939	62,765	63,981	1,453,341	1,364,827
Total cars received from connections	37,396	37,123	38,267	931,315	898,006

Arbitration Board Denies Western Trainmen Wage Increase

Yardmen in same territory awarded 7½ per cent wage increase under Chicago decision

PASSENGER, local or way freight and through freight service trainmen on railroads in western territory were denied an increase of wages amounting to $1 per day or about 19 per cent through a decision of a board of arbitration made public at Chicago on June 25. At the same time the board awarded an increase of 7½ per cent in wages to car retarder operators, yard foremen, helpers and switchtenders on railroads in the same section, which has been made retroactive to March 1. The employees who were denied an increase include conductors, assistant conductors, ticket collectors, train baggagemen, train flagmen and brakemen in passenger service; and conductors and brakemen in local or way freight service and through freight service.

The board of arbitration, which held hearings at Chicago from April 27 to May 24 was composed of W. J. Jackson, chairman of the executive committee of the Chicago & Eastern Illinois, and J. W. Higgins, executive secretary of the Association of Western Railways, for the railroads; E. P. Curtis, secretary and treasurer of the Order of Railway Conductors, and J. A. Farquharson, vice-president of the Brotherhood of Railroad Trainmen, for the employees; and Everett C. Brown, formerly president of the Chicago Livestock Exchange, and W. M. W. Splawn, president of the University of Texas, selected by the United States Board of Mediation. Mr. Curtis and Mr. Farquharson in presenting a dissenting opinion stated that the majority report is based upon false assumptions which have led to the determination of an erroneous figure for the average earnings of each man per year.

Abstract of the Decision

The decision of the board of arbitration is in part as follows:

1. The standard rates of pay per mile, per day and per month for conductors, assistant conductors and ticket collectors, train baggagemen, train flagmen and brakemen, in passenger service, for conductors and brakemen in local or way freight service, for conductors and brakemen in through freight service, and for all classes of trainmen, parties to this arbitration, shall remain the same as established by agreement in 1924 and shall not be increased over the rates in effect on February 28, 1927.

In reaching this conclusion this board of arbitration has considered all of the factors laid down by Congress in the Transportation Act of 1920 and followed by the Railroad Labor Board in its Decision No. 2.

The strongest argument advanced by the Order of Railway Conductors and the Brotherhood of Railroad Trainmen for an increase in wages of the classes of employees represented by them was the recent increase of 7½ per cent granted to these same classes in Eastern and Southeastern territory.

The record shows that the actual earnings of trainmen were more in the Western district than in either the Eastern or Southeastern district before the 7½ per cent increases in these districts went into effect. The average annual earning of train service employees in the Western district in 1926 was 7.4 per cent more than for the same year in the Eastern district; and 6.5 per cent more than for the same year in the Southeastern district. For example, road freight conductors (local and way freight) averaged in 1925 as a yearly wage, in the West, $3,163; in the East, $3,024; in the Southeast, $2,965.

Again, road freight brakemen and flagmen (through freight) averaged in 1925, as a yearly wage, in the West, $2,058; in the East, $1,766; and in the Southeast, $1,823.

The increase in basic rates of 7½ per cent in the East and in the Southeast should have the effect of bringing the average yearly income of conductors, brakemen and other trainmen in those districts up to approximately the average income now received by the same classes of employees in the West. Moreover, the testimony showed that conditions in the West are different from conditions in the East and in the Southeast.

The rates of return of Class I carriers in 1926, based on investment in road and equipment, including materials, supplies and cash, for, the western, eastern and southern districts, was 4.36, 5.47 and 6.23 per cent respectively, while the return based on the tentative valuation of the Interstate Commerce Commission as of 1919, with subsequent additions to road and equipment, for the same districts was 4.70, 5.60 and 6.76 per cent respectively. The increase in the average revenue per ton-mile in 1926 over 1915 was for the Western district 35.19 per cent, for the Eastern district 69.51 per cent and for the Southern district 41 per cent. One reason for this showing is the condition of agriculture in the West.

The Interstate Commerce Commission a few months ago denied Western lines a five per cent increase in rates. In different orders, either denying increases in freight rates or reducing rates in the West, the Interstate Commerce Commission has from time to time stated that it gave consideration to the economic condition of the Western district.

The United States Railroad Labor Board in Decision No. 2 held that among the relevant factors to consider in connection with applications for wage increases, consideration should be given to the effect an increase would have on the relation of railroad wages to the aggregate of transportation costs and requirements for betterments, together with the burden on the entire people of transportation charges.

The gross income of Western lines in 1926 was something more than two billion dollars. The total expenses of operation, including wages, were approximately $1,800,000,000, leaving enough net revenue to amount to a return of something more than four per cent on the investment in Western lines.

To grant this application, carriers contend would ultimately cost $83,000,000 per annum in increased wages, though only about $12,000,000 is involved in the present arbitration. If this contention be correct, other things remaining equal, the effect would be to reduce the net earnings of the Western railroads available for betterments and the like below 3 per cent.

The standard rates of pay per day shall be increased 7½ per cent for yardmen who are parties to this arbitration, effective March 1, 1927. The rates of pay in yard service shall be as follows: Car retarder operators, per day, $7.94; foremen, per day, $7.14; helpers, per day, $6.62; switchtenders, per day, $5.07.

On roads where the trainmen act for yardmasters and assistant yardmasters, the same increases will be added to the present rates as awarded to yard foremen.

Reasons for Increase to Yardmen

The reasons for granting an increase of 7½ per cent to the men in yard service, while having denied any increase to the men in train service involved in this arbitration, are as follows:

While the trainmen in the West have an average yearly wage approximately equal to 7½ per cent more than the average in the East before the increase of 7½ per cent was granted in the East, the yardmen in the West were not earning any more on an average yearly basis than they were earning in the East. The increases in the East and Southeast have had the effect of advancing the actual earnings received by yardmen in those regions above what would be received without a similar increase to those rendering like service in the West.

Again, the board finds that by reason of previous wage

adjustments the men in yard service are in relatively a much less favorable position as compared with men in train service than they were in 1915. On the average in that year, the annual wages of the two classifications were approximately the same. Now those in train service receive on an average about $300 per year more than the men in yard service. The board believes that if there be any difference in the character of the employment, the duties of the yardmen are more onerous than are the duties of the men in train service.

After this increase of 7½ per cent in the standard daily rate paid to yardmen the trainmen will continue to earn, judging the future by past earnings, more than the yardmen, enough more, the board believes, to compensate for away from home expenses incurred by trainmen.

While apparently the yardmen will have an advantage after this increase, as compared with the trainmen, yet the yardmen work only by the day; they cannot as trainmen may do, run out the mileage of a basic day and part of another day all within eight hours.

The board believes that the trainmen under present standard wage rates will continue to earn more money per man employed, on an average annual basis, than will the yardmen even after this increase of 7½ per cent for the yardmen is in effect.

Finally the record shows that about half of the yardmen live in cities of 100,000 or more; that a much larger percentage of yardmen than trainmen live in the larger cities. Obviously living expenses are higher in the more populous communities.

The decision was signed by W. M. W. Splawn, chairman; E. C. Brown, W. J. Jackson, J. W. Higgins, E. P. Curtis and J. A. Farquharson. The two members of the board representing the carriers, Mr. Jackson and Mr. Higgins, pointed out in an assenting opinion that the decision recognizes that in fixing wage rates consideration must be given to the economic condition of the territory affected. They also called attention to the relatively unprosperous condition of the Western railroads and the necessity of the public immediately bearing any increases in transportation costs through the medium of increased freight rates.

Employee Members Dissenting Opinion

"The report of the majority rests upon false assumptions as to the number of the employees which should be used as a devisor in connection with the bookkeeping total of all the compensation paid by the railroads to all men employed, and thus arrived at a false earnings per year per man," declared Mr. Curtis and Mr. Farquharson in the dissenting opinion. Excerpts from the dissenting opinion are as follows:

The record is replete with proof that, for the work performed by these men who are asking for increased wage rates, the unit labor costs are dropping lower and less men are working, even though the tonnage handled has largely and gradually increased.

The majority has gone outside the record to state that obviously living expenses are higher in the more populous communities, and it dwells upon a showing (made by persons whom the employees had no chance or opportunity to cross-examine) that certain percentages of the men live in communities having certain populations, without at all differentiating between the small communities within metropolitan areas which bear all the living costs of the cities themselves.

The majority states that the men can run out the mileage of a basic day and part of another day all within eight hours. The carriers themselves proved the train speed averaged 12.7 miles per hour. In order to make a basic day within eight hours, allowing a half-hour to prepare the train for the road, the train speed would have to average 13½ miles per hour. It is obvious that the conclusion on this matter is not correct.

The majority gave no weight to evidence regarding the wages paid in 53 trades in 54 cities in the United States which showed that journeyman mechanics are receiving from $2 to $6 per day of eight hours more than conductors, yard foremen and helpers are paid for their basic day of eight hours, and that the helpers and aprentices are receiving $2 to $3 more per day than brakemen are paid for their basic day of eight hours.

The unfairness of statistical comparisons to show the average earnings of our classes as compared with the average earnings of employees in other industries grows out of the fact that employees in other industries are calculated as if belonging to their respective classes the year around; whether employed all or only a portion of the year, and the average number of days worked is calculated on that basis.

We are surprised that the majority of the board is of the opinion that the strongest argument advanced by the conductors and trainmen for an increase in wages was the recent granting of 7½ per cent to these same classes in Eastern and Southeastern territory, because the matter was only mentioned briefly during the entire hearing. Plausible, but we believe unfair, use was made in this opinion of a comparison of the supposed earnings of conductors and trainmen in the Eastern and Southern districts with their supposed earnings in the Western district. Moreover, when consideration is given the fact that these supposed average earnings are not average earnings per person at all but are derived by taking for the Class I roads the total compensation adde together for the 12 months and dividing this sum by an average of the 12 counts for the territory made at the middle of each month, the unfairness of using this count as a divisor is clearly apparent. In addition to this, there is nothing to show that the statistical count involves or embraces the same men each month or in any two months, and as a matter of fact it does not.

The majority erred in assuming that the train service employees of the Western district earned approximately 7½ per cent more in 1925 than the employees in the East. By comparing the earnings of conductors and yardmen in the East with conductors in the West, we have the following results:

	Conductors			
	Passenger	Assistant passenger	Through freight	Local freight
East	$2,939	$2,464	$2,555	$3,024
East, plus 7½ per cent	3,159	2,649	2,747	3,251
West	2,982	2,431	2,685	3,163
Shortage	$177	$218	$62	$88

	Yard Conductors	Brakemen	Switchtenders
East	$2,409	$2,011	$1,647
East, plus 7½ per cent	2,590	2,162	1,771
West	2,369	2,045	1,698
	$221	$117	$73

One of the most serious errors made by the majority is that the award disturbs wage levels which were built up through negotiations between the carriers and the employees during a series of years, and which were finally approved by the United States Railroad Administration and later accepted by the United States Railroad Labor Board.

The comparisons in this proceeding were by districts, East, West, and South. The Chicago & Eastern Illinois and the Wabash railways are in the Eastern district, and the Illinois Central System is in the Southern district. It would seem to be impossible to justify the findings of the majority in their failure to increase the wages of the conductors and trainmen employed by these railroads.

D. & H. Tests Scrap-Rail Ties

SUBSTITUTE ties constructed of two scrap rails, two tie plates and a pair of old angle bars or angle irons assembled as a unit by electric welding, has been subjected to a service test on the Delaware & Hudson for over a year with favorable results. The two rails, eight feet long, are placed in workwise position with the inner edges of their bases about one inch apart. They are held securely in place at this spacing by tie plates welded to the heads of the rails at the running rail bearings and by the angle bars which are welded to the ends with the horizontal leg under the rail bases and the vertical leg against the ends of the rails. The tie plates also serve to distribute the traffic load to the two rails of the tie, while the angle members at the ends provide a vertical bearing surface against the ballast to resist lateral displacement of the tie.

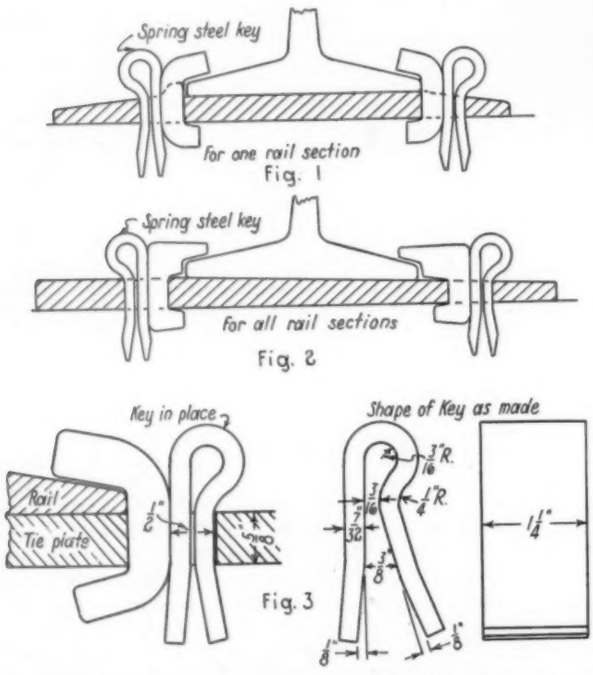
The 15 ties of this design, which have been in service on a heavy traffic yard lead for the past year, are made of 8-ft. lengths of 90-lb. scrap rails, 8-in. by 12-in. steel plates ⅝ in. thick and old angle bars with 3-in. horizontal and 4-in. vertical legs, cut to 12-in. lengths. The tie plates are bead welded to the rails along the edges that are in contact and the angle bars are welded to both the

bases and the webs of the rails. The arc welding was done under the direction of the General Electric Company which is now manufacturing an automatic electric welding machine designed specifically for use in the fabrication of the scrap-rail ties.

Type of Fastening

In the development of this type of tie, much study has been given to the subject of a suitable rail fastening. This has resulted in the design of the two general types shown in Figs. 1 and 2, both of which consist of comparatively simple rail clamps made from rolled shapes sheared to length, and spring-steel, broad-faced keys. The type of fastening shown in Fig. 1 is designed for use with a specific section of rail and its corresponding tie plate, while that illustrated in Fig. 2 is designed for use with a universally punched tie plate capable of taking any section or weight of rail, special shaped clamps being required in this case to fit each specific rail section.

The rail fastenings used in the actual test of the scrap-rail ties on the D. & H., and shown in the installation view, are in general similar to that shown in Fig. 2. However, it will be noted in the photograph that these fastenings have been fitted with a steel cotter pin driven horizontally through coinciding recesses provided in the back of the rail clamp and in the front face of the key. While this has been a further assurance that the fastenings will remain securely in place, this expedient is now deemed unnecessary to a secure fastening, as is indicated by the more recent design of fastenings illustrated in Figs. 1 and 2 where the cotter is omitted. This is also indicated in Fig. 3, which shows in detail the type of fastening that has been adopted as standard on the D. & H. for further installations of the scrap-rail ties.

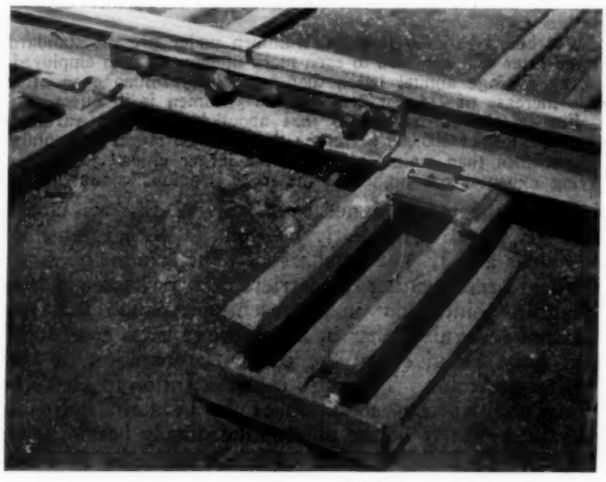


Three Forms of Rail Fastening for the Scrap-Rail Tie

Many Advantages Claimed for the New Tie

As a result of the test installation put in service on the D. & H., it was found that little trouble was experienced in placing the ties in the track in spite of the fact that they are much heavier than wooden ties, this work being greatly facilitated when the ties are unloaded carefully. It has also been found that there has been no movement of the ties in the track, as they afford about ten times the resistance to spreading, remain tight in place and are free from rattling under traffic.

Another advantage of these ties is found in the wide supporting base which they afford, thereby permitting greater tie spacing than is common practice with wooden ties. The H-section of the scrap-rail tie is, in itself, an additional advantage as it affords maximum strength with minimum depth, and at the same time provides an adequate bearing surface for anti-creeping devices. During the present test, extending over 14 months, it is said that no tie or track maintenance has been necessary.



The Scrap-Rail Ties in Track, Showing the Method of Fastening

The cost of the tie is represented by the scrap value of the material used, plus the cost of assembling and welding it, which is about 60 cents per tie, but inasmuch as a credit would be allowed for the scrap value of the tie when released from track, it is contended that the net cost of these ties is but little more than the cost of fabrication.

Favorable Results Secured

While the test installation of these ties on the D. & H. has been made in the entrance to a classification yard rather than on the main line, the results secured have been so favorable that that road is planning to equip its shop at Colonie, N. Y., with an automatic electric-arc welding machine, now being manufactured by the General Electric Company, for the extensive production of these ties. Under the present plan, all such ties will be confined to yard tracks and sidings where long period tests will be made to establish definitely their worth and adaptability for main line service.

The description of the tie presented above is based on information obtained from William Dalton of the General Electric Company, who designed the scrap-rail tie, and from H. S. Clarke, engineer maintenance of way of the Delaware & Hudson, under whom the tests of the tie have been carried out.

TWO SPECIAL AGENTS for the Missouri Pacific, Theodore Brownlow and C. Frick, have been bound over to the grand jury without bond at Marion, Ark., charged with shooting and fatally wounding Prentis Hoop, 15 years old, of Scobey, Miss., after ejecting him from a freight train on June 7.

I. C. C. Examiner Approves Grape Car Plan with Changes

JOHN L. ROGERS, special examiner of the Interstate Commerce Commission, has submitted to the commission a proposed report following an investigation of the California Grape Car Plan, on complaints filed by certain dealers in and growers and shippers of grapes from California, who had asked that the commission disapprove the plan as operated in 1926 and as proposed with some changes for 1927. The report expresses general approval of the plan and says that some such plan is necessary to meet the situation, but it is recommended that the commission require the discontinuance of the district public advisory committees as a feature of the plan and some other modifications are suggested.

Allegations made by complainants that the railroads have failed to produce or make provisions for the furnishing of an adequate number of cars for the transportation of grapes should be found not sustained, the examiner recommends, and the commission should find the rules, regulations and practices with respect to furnishing refrigerator cars for grape loading in California during periods of car shortage not unreasonable or unduly preferential or prejudicial, except as noted.

The Growers' & Shippers' Protective Association intervened in favor of the complaint and the California Farm Bureau Federation, California Growers' & Shippers' Protective League and the Fresno County Farm Bureau intervened in opposition to it. The defendant railroads, while denying certain of the allegations, joined in the request that the commission investigate the complaint and after hearing establish such car service rules, regulations and practices as it might consider proper.

Complainants' objections to the Grape Car Plan of 1926, as well as to the proposed plan for 1927, were summarized as follows: (1) it is impracticable for complainants to give notice of car requirements more than 24 hours in advance of the time when such cars are actually required for loading; (2) the requirement that all shippers not desiring to prepay transportation charges file with them a surety company bond covering charges on contemplated shipments of grapes is unreasonable and subjects them to undue prejudice and gives to other classes of dealers and shippers undue preference; (3) the employment by the carriers of district public advisory committees, composed of other than carrier representatives, for the purpose of reviewing statements of car requirements of individual shippers and data submitted in connection therewith is improper and gives to their competitors information which may be used to their detriment.

Defendant railroads pointed to the fact that in the past there has been much complaint by different grape shipping sections in California as to the distribution of refrigerator cars between sections, certain sections contending that other sections were furnished with more than their just and fair proportion of the available cars. They urged that if such distribution was made, it was due to lack of information by the carriers as to the needs of the various sections, and that the information furnished by shippers under the Grape Car Plan will enable the carriers to avoid such conditions in the future, both as to districts and individual shippers.

Some extracts from the report are as follows:

WASHINGTON, D. C.

From the evidence of record it is obvious that there must be some co-operation between shippers and carriers in securing information as to the grapes which will probably be offered for shipment. There is no dispute as to this, but the difference of opinion arises with respect to when and in what manner the information is to be furnished and the use to be made of it.

The Examiner's Recommendations

The Grape Car Plan, insofar as it affects the distribution of cars between individual shippers, is operative only in periods of car shortage. There was no car shortage in California during the grape shipping season of 1926, therefore the plan has not been tested in the circumstances and under the conditions in which it is contemplated to be of the greatest benefit. In such a period conditions may arise from and results follow the practical operation of the plan which cannot be foreseen. That this may be true is evidenced by the changes made in the plan of 1926. Subject to the observations which follow the commission should not disapprove the Grape Car Plan, 1927. This action should, however, be without prejudice to any complaint that may later be brought.

During the grape shipping season of the year 1926, and while the information was being filed with the carriers in accordance with the Grape Car Plan, 1926, post cards reading in part as follows were sent to shippers:

"Your requirements for refrigerator cars for the shipment of grapes from this District for the week beginning ——— have been allowed as filed. Daily orders for cars as desired must be filed in writing with carrier's agent. Carriers accept no responsibility to furnish full car requirements of any district or individual."

Although the wording of these notices was later changed it is apparent that the announcement by the carriers that "carriers accept no responsibility to furnish full car requirements of any district or individual" misled and caused apprehension among many shippers. The obligation and duty of the carriers with respect to car service are defined by law and obviously cannot be altered or modified by any such declaration or announcement by carriers to shippers. Statements of this character should be avoided in the future.

The second objection of complainants is with respect to the provision in the Grape Car Plan that before cars will be furnished in accordance with the plan shippers must indicate their intention to prepay charges or file with the respective carriers a surety company bond guaranteeing the transportation charges. Complainants urge that surety company bonds are expensive and in many cases are unnecessary because the shippers involved are personally responsible, or could furnish other security which should be acceptable. Also it is urged that certain dealers by reason of the volume of shipments and methods of handling can meet this requirement without inconvenience or loss, whereas complainants are in an entirely different situation.

It is well established that carriers may properly require prepayment of charges in advance of actual transportation. The evidence shows that those complaining of the requirements as to the surety company bond would not in most instances be in position to prepay charges. It also appears necessary that the carriers take some action to protect themselves in the matter of charges. The requirement of a surety company bond is not unusual, in such circumstances, in ordinary business transactions. The commission should find that the allegation that undue prejudice exists by reason of the bond requirement has not been sustained. Compare *New York Produce Exchange* v. *B. & O. R. R. Co.*, 46 I. C. C. 666, 671.

It is provided in the Grape Car Plan, that the state of California will be divided into eight districts and that there shall be for each of such districts a joint railroad representative, acting for all carriers, and a Public Advisory Committee composed of growers, shippers, and bankers. While it is understood that the committee is supposed to be familiar with conditions existing within the several districts and would be in position to advise the joint railroad representatives as to the merits of the individual shipper's request, we have considerable doubt as to the propriety of having such a committee perform such a function in the distribution of cars between shippers. It may be that the advisory committees

perform other functions which have merit, but such functions are not to be confused with the distribution of cars by carriers in accordance with the act.

Further, the evidence of record indicates that no material consideration was given by the committees to the requests of individual shippers at the time of the meetings between the committees and joint railroad representatives with a view to advising the latter as to the propriety of the requests. We can see no good reason why the carriers' representatives cannot do all that is necessary in the consideration of the requests or estimates of shippers for cars, without the assistance or advice of individuals who in most if not all instances are personally interested in the grape deal. This is not to be considered as reflecting on the personnel of the committees, but simply an observation which is dictated by the spirit and mandate of the law. It is felt that the district public advisory committees should be discontinued as a part of the Grape Car Plan, and the commission should so find. Compare *Rules Governing Ratings of Coal Mines,* 95 I. C. C. 309, 335.

Regulation of Shipments to Market Is Not Carriers' Duty

There are indications in the record that the Grape Car Plan is favored by some shippers because the information obtained under the plan is of value in the marketing of grapes. There is also some evidence that due to market conditions some shippers have favored car shortages as means of restricting shipments and increasing the market price. These facts prompt us in observing that regulation of the volume of shipments, or prices at the market, is no part of the duty of carriers and no car distribution plan should be used as a device to accomplish these ends. If reasonable request is made to carriers for cars and the cars are available, they should be furnished without regard to market conditions. Regulation of the volume of shipments and the determination of the markets to which such shipments shall be sent are matters to be handled by the shippers and their organizations, apart from car service rules and regulations of the carriers. The evidence of record shows that some such plan as is here under consideration is necessary in order to enable the carriers to distribute cars among shippers in accordance with the requirements of the act, and it is upon such evidence that the observations herein are based.

Display of Railway Purchases Proves Effective Advertising

THAT the extent of railway purchases can be employed advantageously in public relations work has been demonstrated by a display on this subject recently carried in the windows of the Chicago, Milwaukee & St. Paul new city ticket office at Monroe and Clark streets, Chicago. This display, comprising a collection of typical articles purchased, with facts and figures concerning the volume of expenditures involved and their relation to the industrial prosperity of the country, attracted a great deal of attention from passing pedestrians. The central position of the display was occupied by a scenic poster with a spread of seven feet. This was flanked by two panels bearing the following information for the purpose of impressing upon the public the fact that a railroad is of value to the territory it serves for other reasons than the service it renders.

Left Panel

Payrolls	$840,000,000
Materials	579,000,000
Taxes	81,000,000
	$1,500,000,000

These tremendous sums were paid by the Milwaukee road in the last 10 years:

To—Its 60,000 employees.

To—Merchants and manufacturers for materials and equipment.

To—States served for taxes.

Nearly all of the money earned by this railroad goes back to the people in the territory it serves.

Right Panel

There are 70,000 items used by a great railroad in the operation and maintenance of its facilities.

Last year the Milwaukee spent $22,000,000 for coal, rail, ties, oil and grease, brass, tie plates, rail joints, iron, steel, paint, bolts, nuts, lanterns, picks, shovels, wire, cement, nails, glass bulbs, padlocks, and waste.

On the floor of the show window in front of the card and at either side were samples of railway purchases with a small card on each sample indicating the quantity purchased last year. The items of the display and the information given with each were as follows:

Rail: Model of 130-lb. rail. 5,250,000 rail of various sizes in track.

Ties: 3,212,000 bought last year. Average price, 90 cents.

Picks: 4,600 bought last year.

Shovels: 15,600 bought last year.

Lanterns: 1,000 dozen bought last year.

Spikes: Weight 10 oz. each, cost 1.8 cents each, 250,000,000 in track.

Spikes and Bolts: $397,000 bought last year.

Paints and Varnish: $210,000 bought last year.

Electric Lamps: 334,000 bought last year.

Stationery and Printed Forms: $750,000 bought last year.

Provisions: $375,000 bought last year.

Locomotive Waste: 1,200,000 lb. bought last year.

Coal: 4,450,000 tons consumed last year, 12,330 tons used per day.

In line with the original plan and particularly in view of the attention attracted by the display in Chicago, like exhibits are being made in other parts of the country.

A View of the Exhibit Shown at Chicago

New York Central to Issue Stock

Earnings this year will approximate those of last year, which totaled $14.52 *a share, or over* $20 *with equities*

THE New York Central announced on June 29 an offer to its present stockholders of the right to subscribe at par for $38,325,000 new stock in the ratio of one share of new stock for each 10 shares now held. This action follows upon the recent increase in the annual dividend rate from 7 to 8 per cent effective with the quarterly dividend payment on August 1 and upon the approval by the stockholders last September of an increase in the authorized capital stock from $400,000,000 to $500,000,000. The amount of stock outstanding on December 31, 1926, was $383,258,235. The proposals to increase this in the amount of 10 per cent constitute a further step in the progress which this road has made in recent years in securing what is considered to be an improved relationship between the amount of stock outstanding and the total capitalization.

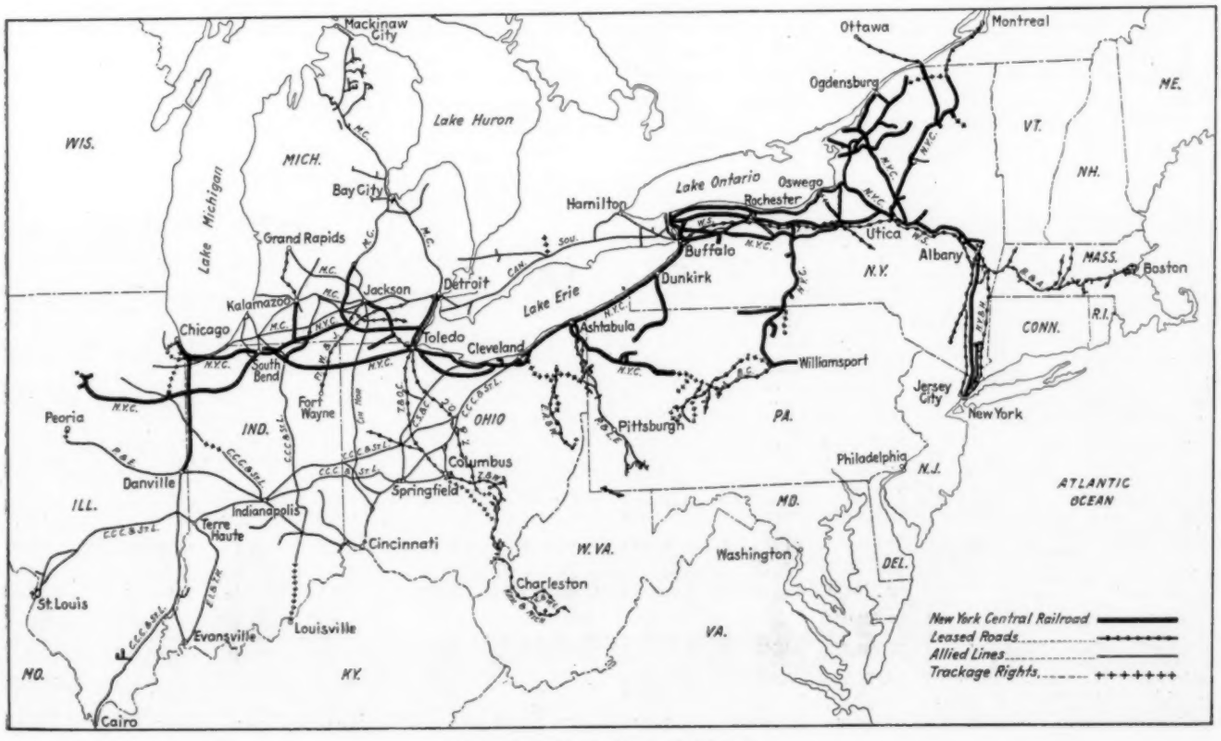
New York Central stock had a closing price on June 29 of 149⅛. The subscription rights for the new stock are estimated to be worth about $4.50 per share. On this basis, New York Central stock, paying 8 per cent dividends, will give a yield at present prices of about 5.5 per cent. The earnings per share in 1926 were $14.52 and will probably approximate at least that amount this year. This would be at the rate of $13.20 a share on the increased capitalization.

Of importance in this connection is the Interstate Commerce Commission examiner's recently announced adverse recommendation relative to the proposed leasing by the New York Central of certain of its subsidiary properties. The I. C. C. examiner's objections were directed primarily at the railroad's failure to include certain short lines in its merger plans. From the investor's point of view the report is of interest because it may presage similar action by the commission. Such would delay making available to the New York Central directly the present equities in the earnings power of its subsidiaries from which it now secures direct benefit only in part in the form of dividends. These equities in excess of the dividend receipts from the subsidiaries which it is proposed to lease total about $5 per share of parent company stock at present outstanding.

The New York Central itself operates directly 6,900 miles of railroad, which now includes the four-track main-line of the system between Chicago and New York (including the old Lake Shore & Michigan Southern) and practically all the mileage of the system east of the Niagara Frontier, including the Boston & Albany and the West Shore, and also the Toledo & Ohio Central lines, the latter three of which are controlled by the parent company by lease. The system as a whole has a mileage of over 12,000, and most of the remaining mileage is controlled by ownership of stock.

Prosperous Subsidiary Lines

The proceeding now pending before the Interstate Commerce Commission, upon which the examiner has made his report, is one proposing to bring into the parent company by lease the subsidiary lines subject to that procedure. Thus, the New York Central owns



The New York Central System

99.15 per cent of the capital stock of the Michigan Central (1,871 miles), which in recent years has become sufficiently prosperous so that it now earns over $100 a share on its stock, of which in 1926 it paid out $35 a share in dividends. This rate has recently been advanced to 40 per cent, nearly all of which will accrue to the New York Central. In the case of the Cleveland, Cincinnati, Chicago & St. Louis (2,397 miles), the parent company owns 84.69 per cent of the preferred and 91.3 per cent of the common stock. The Big Four is sufficiently prosperous so that in 1926 it earned $23.16 a share on its common stock and is now paying 5 per cent on its preferred and will on August 1 increase from 7 to 8 per cent the rate on its common. The merger plans also include the acquisition by lease of the Cincinnati Northern, 97 per cent of the stock of which is owned by the Big Four, the Evansville, Indianapolis & Terre Haute, all the stock of which is owned by the Big Four, and the Chicago, Kalamazoo & Saginaw, all the stock of which is owned either by the parent company or by the Michigan Central. The merger plans do not include the Indiana Harbor Belt in which the Chicago, Milwaukee & St. Paul and the Chicago & North Western each have a 20 per cent interest, or the Rutland, which is controlled jointly with the New Haven, or the Pittsburgh & Lake Erie which the New York Central controls only by ownership of a majority of the capital stock. The last named company in 1926 earned $10.90 per share on its $50 par value stock. It paid regular dividends of $5 or 10 per cent and on February 1, 1927, an extra of 10 per cent.

Earns $20 a Share

In 1926 the New York Central itself reported the largest net income in its history. This totaled $55,664,041, and compared with $48,627,224 in 1925. The 1925 earnings were equivalent to $12.66 a share on the capital stock, whereas the earnings in 1926 were equivalent to $14.52 a share. This net income included substantial dividend payments from the subsidiary companies. It will appear upon investigation, however, that whereas the Michigan Central in 1926 earned net income of $18,963,899 it paid dividends of only $6,557,740 leaving a balance of $12,406,159. Big Four net income totaled $11,395,283 whereas the dividends totaled $3,791,934 and there was an income balance of $7,555,929. In the case of the Pittsburgh & Lake Erie, the net income was $7,838,642; the dividends totaled $7,197,120, including the extra of 10 per cent, but this extra dividend was not paid until February 1, 1927, and, therefore, was not shown in the New York Central 1926 income statement. Analyzing the situation, generally, it appears that the New York Central's excess equity in the earnings of its subsidiaries beyond the dividends actually paid figured out to over $21,000,000 or about $5.50 a share on the outstanding capital stock. This would have increased the earnings per share of the parent company from $14.52 to $20.02 and there are also other equities beyond these.

Relationship Between Stocks and Bonds

The other important point mentioned above was the relationship between the capital stock and the bonds outstanding. This is shown briefly in Table II:

Table II—Comparison of Stocks and Bonds Outstanding

Dec. 31, year	Capital stock*	Funded debt	Total	Per cent stock of total
1916	$249,590,460	$672,929,007	$922,519,467	27.0
1918	249,597,355	668,285,201	937,882,256	26.6
1920	249,597,355	748,354,477	997,951,832	25.1
1921	249,597,355	739,592,969	989,190,324	25.3
1922	267,981,915	762,956,287	1,030,938,202	26.0
1923	268,323,375	769,979,489	1,038,305,549	25.8
1924	305,310,300	776,916,391	1,082,226,691	28.2
1925	387,655,085	696,501,507	1,084,156,592	35.5
1926	387,655,085	694,380,124	1,082,035,209	35.8
With 10 per cent increase.....	425,980,085	.....	1,120,360,209	38.0

*Includes premium on capital stock; amounting in 1926 to $4,396,850.

Prior to the war the proportion of capital stock to total capitalization was only 27 per cent whereas it has now become 35.8 per cent and with the new issue will become 38 per cent. By 1923, the company had had to increase its funded debt over the amount outstanding in 1916 about $100,000,000 and the proportion of capital stock to total capitalization was reduced to 25.8. At present the funded debt is $80,000,000 less than it was at the end of 1923 and only about $22,000,000 larger than at the end of 1916, while the amount of capital stock outstanding is $138,000,000 larger than at the end of 1916 or about 55 per cent greater. This

Table I—New York Central Railroad Company, Operating Results, Selected Items, 1918 to 1926

							Including operating results of Boston & Albany and Ohio Central Lines			
	1918	1919	1920	1921	1922	1923	1923	1924	1925	1926
Mileage	5,682	5,675	5,684	5,704	5,710	5,700	6,890	6,920	6,931	6,928
Total operating revenues..	$269,270,957	$283,659,331	$338,624,456	$292,130,995	$316,620,098	$365,175,188	$421,034,784	$369,606,930	$385,994,505	$399,537,749
Total operating expenses..	210,637,849	224,964,912	317,799,173	221,768,390	250,400,470	278,602,021	325,917,241	279,970,163	290,440,958	298,931,038
Net operating revenues...	58,633,108	58,694,419	20,825,284	70,362,605	66,219,628	86,573,167	95,117,543	89,636,767	95,553,546	100,606,711
Taxes	11,273,156	10,601,745	.....	18,132,163	17,361,160	20,053,594	22,656,867	23,289,540	25,343,923	26,881,808
Railway operating income.	47,342,357	48,077,077	.....	52,176,357	48,805,052	66,421,414	72,355,699	66,167,887	69,992,348	73,557,823
Equipment rents, net Dr..	3,411,326	2,418,758	.....	961,047	1,233,223	4,126,180	4,482,667	4,602,564	5,079,852	4,693,333
Joint facility rents, net Cr.	2,108,205	2,427,999	.....	3,722,724	2,999,716	3,520,566	3,116,069	3,069,751	3,008,054	3,294,002
Net railway operat'g income	52,230,408[1]	51,016,807[1]	.....	54,938,035	50,571,544	65,815,799	70,989,101	64,635,074	67,920,550	72,158,492
Dividend income	6,379,729	6,018,703	6,655,251	6,316,257	10,309,803	14,464,455	14,911,850	14,388,778	15,318,325	18,224,255
Total non-operating income	12,949,375	13,619,366	15,459,803	20,121,944	19,051,274	25,317,305	24,668,309	24,123,217	25,419,095	29,076,690
Gross income	69,270,921[2]	71,308,505[2]	65,109,739[2]	75,097,499	69,951,089	91,343,388	95,867,694	88,921,304	93,430,020	101,257,458
Interest on funded debt...	29,432,623	29,227,222	30,736,911	33,598,469	34,855,173	33,881,249	33,881,249	34,191,311	28,684,284	29,268,397
Total deductions from gross income	44,805,576	48,194,885	48,053,753	52,801,813	49,315,903	46,003,961	50,528,267	49,670,904	44,802,796	45,593,417
Net income	17,917,122	19,917,251	13,734,688	22,295,686	20,635,186	45,339,427	45,339,427	39,250,400	48,627,224	55,664,041
Dividends	12,479,610	12,479,611	12,479,615	12,479,641	12,876,985	17,432,978	17,432,978	20,728,835	26,732,833	26,827,815
Income balance	5,321,948	7,433,063	1,250,256	9,747,588	7,643,871	27,748,778	27,748,778	18,399,461	21,768,273	28,691,047
Rev. ton miles (thousands)	23,851,288	20,186,750	22,567,929	14,831,625	17,648,981	22,764,912	26,321,575	21,095,678	22,463,487	23,634,239
Rev. passenger miles (thousands)	2,520,527	2,954,170	3,094,163	2,608,080	2,572,565	2,758,223	3,193,533	3,122,308	3,168,122	3,279,968
Rev. per ton mile (cents).	0.737	0.862	0.930	1.208	1.122	1.035	1.040	1.077	1.069	1.051
Transportation ratio	40.63	40.46	47.01	38.53	36.93	34.93	35.39	36.46	34.79	34.00
Operating ratio	78.23	79.31	93.84	75.91	79.09	76.29	77.41	75.75	75.24	74.82

[1]From operations by U. S. R. A.
[2]Includes standard return or guaranty. Standard return was $55,802,630.

change has been brought about by three principal events, one being the issuance of some $18,500,000 of stock in exchange for Big Four stock, another the conversion of $88,000,000 of convertible bonds and the third the issuance of some $25,000,000 of stock in 1924 to stockholders at par to the extent of 10 per cent of their holdings.

Supplementing these details is the fact shown in Table I that in 1924 the New York Central paid out in interest charges on funded debt $34,191,311 whereas it paid out in 1926 $29,268,397, or less than in 1918. On the other hand, its dividend disbursements in 1918 (5 per cent) totaled $12,479,610 whereas in 1926 due to an increase to 7 per cent in the dividend rate and the greater amount of stock outstanding, its stockholders received $26,827,815 or over twice as much. Further, it will be noted that dividend income from stock in subsidiary and other companies in 1918 totaled $6,379,729 whereas in 1926 this was increased to $18,224,255 and equalled about 62 per cent of the interest payments.

The authorized capital stock of the company, including the $100,000,000 recently authorized, is $500,000,000. The amount outstanding now totals $383,258,235, shortly to be increased to $421,583,235, which amount will be supplemented slightly as payments are completed on a large volume of stock recently made available for New York Central employees.

Operating Efficiency

Although in 1926 the New York Central reported the largest net income in its history it did not handle quite as large a volume of traffic as it handled in 1923. The year 1923 was the property's record year. Indeed, it has been generally understood that the New York Central was benefited in that year possibly to a somewhat abnormal extent by its ability to handle traffic at a time when other railroads were handicapped by their efforts to overcome the effect of the 1922 shop men's strike.

In the several articles which the *Railway Age* has had about the New York Central in recent years, the impression has generally been given that the New York Central had a remarkably rapid recovery from the effects of Federal control and that it showed unusual skill both in its ability to handle traffic with expedition and from the standpoint of its ability to control its expenses after the extravagances of the Federal control period. There is no reason to suggest that there has been any change in this situation. In other words, it would appear that the New York Central has continued to hold its own as one of the better operated properties of the Eastern District and has continued to show a like degree of improvement as compared with other carriers even though comparisons may be made with years in which the New York Central was already in an outstanding position. Such statistics are shown in Table III in which comparison is given of selected freight operating statistics for the New York Central and for the Eastern District in 1926 as compared with 1923.

It was noted above that the New York Central, apparently because of special conditions, did not carry as much freight in 1926 as in 1923. The decrease in gross ton-miles was 4.8 per cent and for the net ton-miles 8.5 per cent, whereas for the Eatsern District as a whole there was a decrease of 5.5 per cent in the gross ton-miles and the net ton-miles were about the same. The New York Central figures include those for the West Shore and Boston & Albany and the Toledo & Ohio Central lines but, of course, do not include the Michigan Central or the Big Four.

In 1923 the New York Central reported better figures than the average for the district for car-miles per day, net ton-miles per car day, train-loading, train-speed, gross ton-miles and net ton-miles per train hour and for fuel consumption. In 1926 its figures still exceeded the averages for the district in each case. Particularly interesting is it that whereas the district has made an increase of 12 per cent in its train speed, the New York Central has made an increase of 13½ per cent, and that while the gross ton-miles per train hour for the district have increased 21.5 per cent, the New York Central shows an increase of 21.3 per cent.

The only disconcerting feature is the New York Central's high percentage of unserviceable freight locomotives, in 1923 25.1 per cent and in 1926 still 21.1 per cent. However, even in the peak month of 1926, which was October, the New York Central still had a reserve of 16½ per cent of its freight power stored in serviceable condition, so it will be seen that the road apparently has a large margin of surplus power which gives it considerable leeway in the matter of locomotive repairs. While the percentage of freight cars unserviceable was 3.8 per cent in 1926, or about one-half the figure for the district as a whole, the amount of money spent for freight train car repairs in 1926 was $1,308,000 less, or 5 per cent less than in 1925.

The New York Central sytsem is not doing quite as well thus far in 1927 as it did in 1926. The parent company figures for the first five months show net railway operating income of $24,168,097 as compared with $25,532,821 for the first five months of 1926, a decrease of 5½ per cent. The New York Central figures show an increase in gross of $1,386,836 but a decrease in net operating income of $1,364,724 following upon an increase in expenses of $1,868,529. A fair proportion of the latter was due to increased maintenance expenses presumably for track-work made possible by a more favorable spring season which presages improvement on this score later in the year. Decreases

Table III—Comparison of Selected Freight Operating Statistics

	New York Central				Eastern District			
			Per cent of change				Per cent of change	
	1926	1923	Inc.	Dec.	1926	1923	Inc.	Dec.
Mileage operated	6,482	6,469	0.2	...	58,784	59,180	...	0.6
Gross ton-miles (thousands)	57,861,955	60,817,175	...	4.8	451,208,185	427,665,184	5.5	...
Net ton-miles (thousands)	25,305,895	27,638,706	...	8.5	207,397,009	207,538,668	...	...
Freight train-miles (thousands)	25,823	28,805	...	10.4	224,118	251,078	...	10.7
Freight locomotive-miles (thousands)	31,392	35,461	...	11.4	289,518	299,717	...	3.4
Freight car-miles (thousands)	1,513,358	1,577,773	...	4.0	11,298,458	10,487,855	7.6	...
Freight train-hours	2,181,452	2,777,565	...	20.5	21,872,621	25,171,735	...	13.0
Tons of coal consumed by freight locos.	3,845,459	4,331,069	...	11.2	35,637,307	38,605,743	...	7.6
Car-miles per day	29.9	28.2	6.0	...	26.5	24.5	8.2	...
Net tons per loaded car	26.7	27.7	...	3.6	28.8	29.9	...	3.6
Per cent loaded to total car-miles	62.7	63.4	...	0.7	63.8	66.1	...	2.3
Net ton-miles per car day	501	494	1.4	...	486	485	...	...
Freight cars per train	59.6	55.8	6.8	...	47.3	42.8	10.5	...
Gross tons per train	2,241	2,111	6.2	...	1,848	1,703	8.5	...
Net tons per train	980	960	2.1	...	850	827	2.8	...
Train speed, miles per train-hour	11.8	10.4	13.5	...	11.2	10.0	12.0	...
Gross ton-miles per train-hour	26,524	21,896	21.3	...	20,629	16,990	21.5	...
Net ton-miles per train-hour, incl.	11,600	9,951	16.6	...	9,482	8,245	15.0	...
Lb. coal per 1,000 gross ton-miles	121	129	...	6.2	139	159	...	12.5
Loco.-miles per loco.-day	58.6	56.2	4.2	...	60.0	58.0	3.5	...
Per cent freight locos. unserviceable	21.1	25.1	...	4.0	17.5	22.2	...	4.7
Per cent freight cars unserviceable	3.8	8.1	...	4.3	7.1	7.8	...	0.7

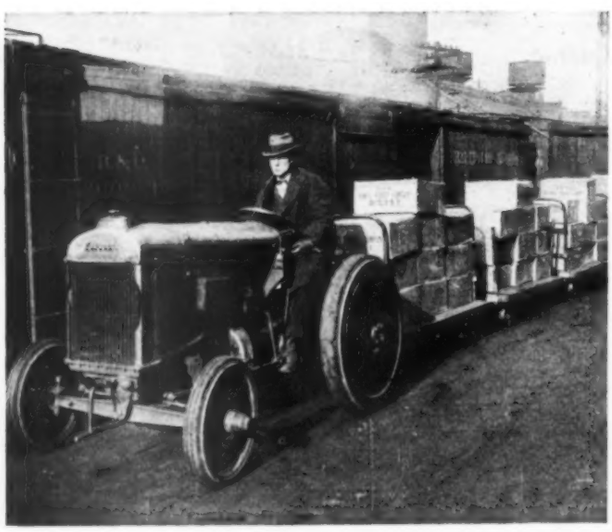
have also been shown for all the lines in the New York Central system.

Five Months to May 31	1927	1926	Increase or decrease
Operating revenues	$158,541,206	$157,154,370	$1,386,836
Operating expenses	122,064,008	120,195,479	1,868,529
Railway operating income after taxes, equipment rents and joint facility rents	24,168,097	25,532,821	—1,364,724

However, it also happens that the New York Central will make up some of its decrease in net railway operating income by increased dividend income from its subsidiaries. Thus the Michigan Central has recently changed its dividend rate from 35 per cent annually to 40 per cent which will increase New York Central receipts from that source in 1927 2½ per cent or $464,447. There will also be an increase of ½ per cent in dividends this year on Big Four common accruing $214,706 to the New York Central; last February there accrued to the parent company half of a 10 per cent extra dividend on the Pittsburgh & Lake Erie which amounted to $1,799,310.

The New York Central is also a large stockholder in the Reading Company and during the past year increased its holdings slightly so that they now include 262,900 shares of common stock. The corporate income account will, therefore, be benefited to the etxent of this ownership in Reading common stock in the extra dividend of 2 per cent on that issue which was paid on February 10, the New York Central's share amounting to $262,900. The total of these increased or extra dividends totals $2,741,363.

A general analysis of the situation giving due consideration to the wage increases, the decrease in the net operating income for the year so far as reported and, on the other hand, the increased or extra dividend receipts would lead one to believe that the indicated earnings per share on New York Central for 1927 would be not far different from, and likely to be more rather than less than, the $14.52 which was reported in 1926, in addition to which there are the indirect equities in the subsidiary companies beyond those accruing to the New York Central in the form of dividends, which total an additional amount sufficient to make the total earnings or equities approximately $20 a share. These amounts would be reduced slightly with the increase in the stock outstanding.



A Modern Way of Handling Materials

Attitude of Short Lines Toward Consolidation

WASHINGTON, D. C.

A STATEMENT by Ben B. Cain, vice-president and general counsel of the American Short Line Railroad Association, explaining the attitude of the short-line railroads in relation to the plans of the larger railroads for consolidations, mergers, unifications, etc., was made a part of the record of the recent hearings on the application of the Chesapeake & Ohio for authority to acquire stock control of the Erie and Pere Marquette. It was presented on behalf of seven intervening short lines: the Arcade & Attica; Arcadia & Betsey River; Chicago, Attica & Southern; Morehead & North Fork; Mt. Jewett, Kinzua & Riterville; New York & Pennsylvania, and Prattsburgh. Mr. Cain took the position that the principal object of the consolidation provisions of the transportation act was the preservation of the short lines and he said that the commission should make a provisional order, rather than a final order, holding the application open until a complete consolidation plan has been adopted. Extracts from Mr. Cain's statement follow:

It is undoubtedly more important to preserve the weak roads whose loss would be calamitous to the people they serve than to give the people served by strong roads the benefit of somewhat lower rates, assuming that the economies would be passed on to them. Any other policy would be nationally disastrous, for if non-paying short lines be abandoned while large roads combine to make more and more money, or to lower rates on the traffic they haul, it would be just as logical to lop off non-paying branches of the larger lines, until finally the transportation system would be stripped down to the trunk lines of the greatest traffic density, and that traffic density would shrink—just like Rock Creek here in the District of Columbia has shrunken because the branches and rills which fed it have dried up or been diverted.

Motor Transportation Not a Satisfactory Substitute

The automobile and truck may scratch the surface of development in an area, just as you may say skim off the top, but the automobile or truck can never provide that species of transportation which the undeveloped areas of this country require to bring them in and make them prosperous. I think the passenger bus may be a fair substitute in small communities, but I cannot conceive of any community growing that does not handle freight by carload, in carload quantities, and the community which would have to first haul its traffic by trucks any considerable distance to get to a railroad would be under a prohibitive handicap.

Higher Rates for Short Lines Impracticable

It is manifestly impracticable, if not impossible, under our scheme of rates, as well as under the operation of economic law, for one road to charge a higher rate than another. I think the Supreme Court went to the heart of the problem when in the *New England Divisions' Case* it said tersely: "If the weaker roads are permitted to charge higher rates than their competitors, business would seek the stronger road with the lower rate." Congestion on the strong road would follow, industries and business enterprises would naturally gravitate to the line with the lower rate, and consequently the traffic on the road with the higher rate would ultimately dry up and the road perish.

Railroad history is replete with examples where short lines formerly weak have been combined and become very successful. Indeed, that is the ordinary story, but in the meantime these little railroads are at a serious disadvantage in regard to their operating expenses. A weak road, with insufficient capital cannot develop its potentialities. It cannot locate industries. It cannot go out and compete with stronger lines in influencing the routing of competitive traffic. It cannot hope that its business will grow and people will come and locate their homes, their industries, their institutions, upon that line, so long as that line's tenure of life is necessarily uncertain, as it is when these strong systems with which it must compete are being formed.

Furthermore, it is manifest that capital cannot be procured for the aid of short line railroads so long as uncertainty as to their status, as it may be affected by consolidation, exists.

Attitude of Short Line Railroad Association

The attitude of the American Short Line Railroad Association in these cases may be stated as follows:

No thoughtful or patriotic citizen believes for a moment that the weak and short railroads as a class can or should be abandoned. In dealing with the problem Congress reached the conclusion that some carriers ought to be abandoned and it gave to the commission power to eliminate such roads from the transportation system; but as to those which ought not be abandoned Congress reached the conclusion that public interest could best be served by their preservation; hence it adopted the policy of consolidating the railroads of the United States into a limited number of systems and required the commission, as soon as practicable, to announce a final plan in the line of accomplishing that purpose.

The purpose of Congress and the policy of the nation, as reflected in the Transportation Act of 1920, is to furnish adequate transportation to the country as a whole. This commission and the highest court have so interpreted that Act.

In the accomplishment of the national policy, Congress wisely gave to this commission the broadest discretion in regard to the merger of railroads. The one fingerboard which Congress set up for the guidance of the commission is consideration of the public interest, at the same time making it plain that it considered the public interest to be an adequate system of transportation, and providing as a final method of furnishing such adequate transportation the consolidation of the railroads.

We dispute the proposition that there is anything in the Transportation Act of 1920 that ought to, or does in fact, defeat or necessarily defer consolidation of the railroads. What has been pointed out as objectionable is the adoption of a plan, as we see it, wrongly interpreted to mean a complete map. The reason usually advanced for such objection by those who criticize the act is that if and when the commission announces a plan and divides the railroads into groups or systems, that then the weak railroads will immediately demand an unfair price for the properties. Those who present such arguments seem to overlook the fact that the commission has not only the power, but is charged with the duty, of valuing the roads, and there can be no consolidation or merger except at such value as the commission shall approve. In view of this fact and in view of the further fact that consolidation is not compulsory, it seems unreasonable to say that the owners of any railroad really desiring to sell would place an inflated value upon its property.

If the interests that control the railroads of the United States condemn the present law because it does not give unbridled license to exploit the weak roads for greed of gain, then it would be better that there should be no mergers for it will mean quick ruin for the short and weak roads if roads of major strength and earning power are permitted to merge their properties without making some provision for the small and weak roads.

Commission Should Announce Policy to Protect Weak Roads

We never can consent to the proposition that this commission shall refrain from bringing out a plan for consolidation of the railroads or that the commission shall allow such consolidations as are here proposed without announcing a policy that will serve to protect the weak carriers while the process of merger is going on.

We have been charged and may be charged again with responsibility for obstructing consolidation and warned that we may make it impossible to carry out the national policy. Those who want to proceed to accomplish this along natural lines must not forget that the short and weak roads, moved by the self-same law, are forced to defend themselves against such a situation. We dispute the statement that our attitude will defeat consolidation; but if such a statement were true, we would still be compelled to look first to our own self-preservation; and even though we should reach the conclusion that our position would ultimately defeat consolidation, we would also at the same time be compelled to reach the further conclusion that consolidation would not serve us after we are dead.

It is our earnest belief that if we have no change in the law and if strong and weak roads will sit together across the table and deal fairly with each other, we could almost immediately adopt a plan of co-operation with the commission that would result in a solution of our problem and the accomplishment of the national policy. The trouble, it seems to us, is, that we are all yielding to the temptation of making money out of the situation, hence are not yet ready to meet each other and the commission in the proper spirit.

We would not be frank if we did not say we have no hope that we will come to such a program unless and until the commission uses its power in the performance of its duty to enforce such a situation. This can be done and we think this case furnishes an appropriate beginning. No matter what position the applicant may take as to the result, we respectfully submit that the duty of this commission is plain. The commission is an administrative agency of the government. The government has declared its policy to be the accomplishment of an adequate system of transportation for the people as a whole. Everybody knows this can only be accomplished in one of two ways: (1) By consolidating the railroads into systems under private operation with broader powers of regulation on the part of the commission, and (2) Government ownership and operation.

Students of the railroad problem generally agree that consolidation of the roads can only be brought about by progressive action through a somewhat lengthened period of time. If the application now before the commission is granted, with conditions properly safeguarding the interests of intervening short lines, and with an eye single to the ultimate consolidation of all the railroads into a limited number of systems, according to the mandate Congress has enacted, then I believe it would be in harmony with the law and will promote the public interest.

Communications and Books

Keeping the Work Train Busy

PORTLAND, Me.

TO THE EDITOR:

I have noted your editorial with reference to keeping the work train busy in the *Railway Age* of April 16.

A plan that we have found very satisfactory on our line is to have an operator accompany the work train and open a telegraph office at a point between stations where the track crew is working. The operator keeps in touch with the dispatcher in regard to regular and extra trains, passing the information he receives from the dispatcher along to the conductor of the work train and the foreman of the track crew. This is real co-operation that is worth dollars and cents to the company and the expense of the telegraph operator is negligible in comparison with that of a crew of men tied up waiting for an overdue train.

It is almost impossible for any dispatcher to figure accurately on extra trains on a single track road where they usually make their own meets with regular trains. The dispatcher may figure that a certain extra will make Station C for No. 9 and should pass B at a specific time but he is disappointed when he later finds that the extra hauled in at D for No. 9 and the line-up that he had previously given the work train has been knocked to smithereens.

DISPATCHER.

Painting Locomotives on the Chicago Great Western

CHICAGO.

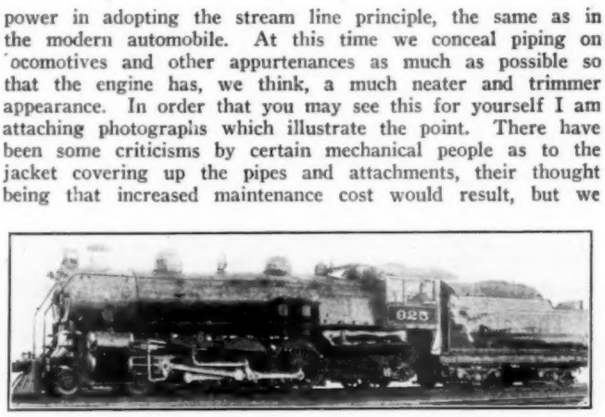
TO THE EDITOR:

I have read the article with reference to the Baltimore & Ohio's "President" class of locomotives which appeared in the *Railway Age* of April 9, page 1121. This was extremely interesting, but I was somewhat surprised in the thought expressed that it was something new.

I know you are familiar with the fact, although it may have escaped your mind for the time being, that the standard on the Chicago Great Western since 1910 has been to paint our passenger locomotives in keeping with the train, all but one being painted the standard Pullman color, decorated with gold striping and lettering which matches the color and decoration of the equipment handled in the train.

We have one engine, No. 916, handling the Rochester Special, popularly called "The Red Bird." The tender, cab, jacket, cylinder casing, driving wheels, trailer and pilot of this engine are painted a bright maroon to match the equipment in the train, which consists of a combination baggage and mail car, two day coaches and a parlor-observation car. The locomotive, as well as the train, is trimmed in gold, the latter having an interior finish to harmonize. The smokebox, stack and other parts of the engines are in black, with all the motion work polished.

Since 1924 we have, I think, gone one step further than other companies in improving the appearance of our passenger power in adopting the stream line principle, the same as in the modern automobile. At this time we conceal piping on locomotives and other appurtenances as much as possible so that the engine has, we think, a much neater and trimmer appearance. In order that you may see this for yourself I am attaching photographs which illustrate the point. There have been some criticisms by certain mechanical people as to the jacket covering up the pipes and attachments, their thought being that increased maintenance cost would result, but we have found the countrary has been the case; our maintenance on this type of machine is less than the other.



Chicago Great Western Locomotive No. 925

The type illustrated by Engine 925 handles the Legionaire between Chicago and the Twin Cities and is regularly assigned to service between these points, averaging 424 miles per day per locomotive, service being entirely satisfactory. The engines have averaged over 145,500 miles between shoppings.

N. L. HOWARD,
President, Chicago Great Western.

How the Farm Situation Looks to a Farmer

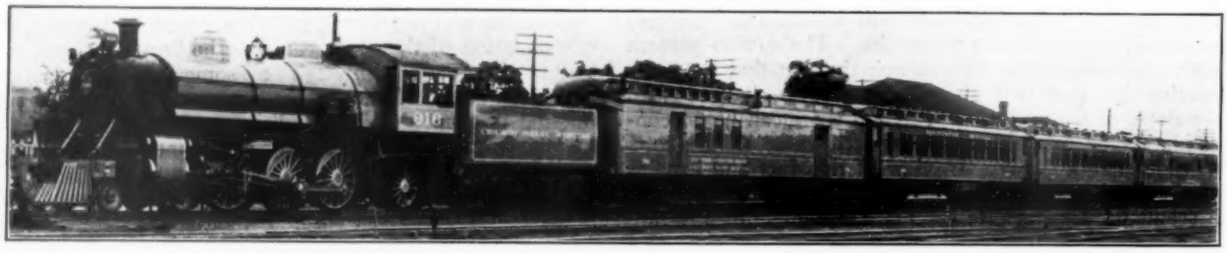
CHICAGO.

TO THE EDITOR:

In a recent number of *Railway Age*, you refer to some comments on farmers and farming by L. E. Sheppard, president of the Order of Railway Conductors, and A. F. Whitney, vice-president of the Brotherhood of Railroad Trainmen.

In an effort to prove that the farmer's status is as good or better than that of a railroad employee or any city worker, it is stated that 97 per cent of Nebraska farmers own automobiles. They cannot ride between their homes and their markets in elevated trains or electric street cars. They need automobiles just as they need breaking plows. To be sure farmers got by with horses and mules for transportation before the days of automobiles. So did city people get by with horses and mules for transportation before the days of automobiles and electricity. Should city people go back to horse cars?

It is stated that 89 per cent of Nebraska farmers have telephones, that, too, is a necessity and no indication of prosperity. The farmer shouldn't have to hitch up his horse to his buggy and drive from 2½ to 10 miles to the nearest market to ascertain the price of hogs.



Chicago Great Western Locomotive N o. 916, and Its Train, "The Red Bird"

Farmers are accused of having bathrooms and electric lights, yet very few railroad owners are without these conveniences. In fact very few city dwellers without any capital at all are without these conveniences, whereas it is a fact that not one farmer in ten in Tippecanoe county, Indiana, the county in which Purdue University is located, have these conveniences. I happen to have them in my farm home, but they were acquired in 1920 and I am now working in Chicago and paying my farm taxes from money earned in Chicago, where I have no capital invested.

It is mentioned that farmers are retiring and moving to town. Only last week I was talking to a big north side builder of Chicago, formerly a farmer of Tippecanoe, county, Indiana, and his sons. One of the latter told me of a relative, old and worn out, with a life (a sentence) of hard labor on his farm, who had retired to Lafayette, Indiana, where all he was able to acquire was a house and lot worth about $5,000 in which to spend his declining years. This represented his surplus; he retained his farm, renting it, in order to provide food and other necessities of life. A very charming picture, was it not?

Oh, yes, corn is higher now, but the farmers sold theirs in March or before. I am trying to sell my farm, and cannot get the bid on it I could have a month ago because the prospects are afraid it will be impossible to get a crop of corn on it this year on account of the incessant rain fall.

The farmers are blamed because a small percentage of them bought land at high prices a few years ago. They have not had any trouble to dispose of their land. All they have had to do has been to wall off their quarter section or half section or section farms and walk or bum a ride to Chicago and start life all over again. Forget high war prices. (Right here let me note, however, that no one seems to be accusing Chicago real estate owners of foolish actions because they are paying more for real estate than it was worth in 1913.) Farmers who neither bought nor sold are discouraged. The best land in Indiana will not bring within 25 per cent of what it would have brought in 1913, before the war was ever thought of. To say as many are saying now, that no farm land anywhere is worth more than $100 or $125 per acre is just as reasonable and as unreasonable as to say that no six-apartment building in Chicago is worth more than $15,000 or $20,000, or about 75 per cent of equivalent 1913 value.

ALEX L. SHERIDAN.

Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

The Broadway Limited 1902-1927, by Katherine Woods. An illustrated history of a famous train. 47 p. Pub. by Pennsylvania Railroad, Philadelphia, Pa. Apply.

An Introductory Survey of Railway Transportation. A compilation of statements published in student newspapers and magazines published along the line of the Illinois Central which affords concentrated and authoritative information on railway service, organization, and the various individual departments of a large system. 34 p. Pub. by Illinois Central System, Chicago. Apply.

Union List of Periodicals in Some of the Special Libraries of Pittsburgh, compiled by Mary M. Lynch and Henrietta Kornhauser. While looking through the pages to see in which libraries are the most complete files of favorite railway periodicals readers will also be impressed by the remarkable collections of medical periodicals available in Pittsburgh. The records of 17 special libraries including that of the Traffic Department of the Bessemer & Lake Erie are included. 143 p. Pub. by Pittsburgh Special Libraries Association, Pittsburgh, Pa. $3.

Periodical Articles

Railroads and the Capital Market. Present tendencies in railroad finance. Bache Review, June 11, 1927, p. 1-3.

Treated Timber Bridge on Charleston & Western Carolina Railway. Includes illustrations of the 400-ft. open-deck bridge described. Maximum height, 65 ft. Wood Preserving News, June, 1927, p. 64-65.

Looking Backward

Fifty Years Ago

The Iowa railroad law, in a suit which the Chicago, Burlington & Quincy appealed from the state court to the United States Supreme Court, has been declared to be constitutional. This affirms the position that a state may regulate rates at will.—*Railroad Gazette,* June 29, 1877.

A panic was created in the Baltimore stock board on June 20 by the decline in Baltimore & Ohio shares which opened at 93¾ and sold down to 80—a decline of $15 per share from the closing prices of the previous day. A year ago this stock was quoted at from 190 to 195, and even now it is noticeable that the large holders evince no desire to sell.—*Chicago Railway Review,* June 30, 1877.

A barber shop is the latest addition to the features of modern railway travel, the Ohio & Mississippi [now a part of the Baltimore & Ohio] having applied this luxury to its parlor cars. Bath-rooms are now about the only convenience of hotel life not afforded on wheels, and some bold genius may yet remedy this presumably "felt want" of the never satisfied traveler.—*Railway Age,* July 5, 1877.

Twenty-Five Years Ago

R. H. Aishton, general superintendent of the Chicago & North Western, has been appointed assistant general manager.—*Railroad Gazette,* July 4, 1902.

It is announced that the Pennsylvania will pay rebates to passengers on its 20-hour Chicago trains whenever these trains are more than two hours late. The minimum rebate will be $2 for a two-hour delay with an additional rebate of $1 for each additional hour that the train is delayed.—*Railroad Gazette,* July 4, 1902.

The assurance of the passage of the Isthmian Canal bill has revived the discussion of the effect upon the revenues of transcontinental railways of such a waterway. It is thought that either the route will greatly injure the business of the railways or that the upbuilding of the Pacific coast will create enough new traffic to more than compensate the railways for that which is lost to the water carriers.—*Railway Age,* July 4, 1902.

Ten Years Ago

The Interstate Commerce Commission has begun the work of moving from its present quarters, scattered through four different buildings in Washington, to its new office building at Eighteenth street and Pennsylvania avenue.—*Railway Review,* June 30, 1917.

The recommendations of the Interstate Commerce Commission, repeated in its annual report, "that the use of steel cars in passenger train service be required," seems in a fair way toward being carried out without any further effort on the part of the commission. Only three wooden cars for passenger train service were built during 1916 and only ten wooden passenger cars were under construction on January 1, 1917.—*Railway Age Gazette,* June 29, 1917.

Declaring that the United States is threatened with a serious shortage of coal, largely because of failure of the transportation system, the Federal Trade Commission, in a report to Congress on June 20, of its investigation of the production, distribution and price of coal, recommended that for the duration of the war the production and distribution of coal and coke be conducted through a pool in the hands of a government agency and that the transportation agencies of the United States be similarly pooled and operated under the direction of the President. The commission also recommended that the owning corporations be paid a fair compensation, the properties to be returned unimpaired to private operation after the war.—*Railway Age Gazette,* June 29, 1917.

Odds and Ends of Railroading

Roundhouse Foreman: "And did her father come between you?"

Love-Sick Fireman: "Oh, no, behind me."

Jim—"My friend Jones is a haberdasher for a railroad company."

Jam—"What does he do?"

Jim—"He looks after the ties."

—EXCHANGE.

The Southern Pacific has just received what is probably the world's record request for a ticket refund from the standpoint of elapsed time. F. A. Skov, of Livermore, Cal., has just presented for refund a ticket from San Francisco to Livermore that was purchased in August, 1887, nearly 40 years ago.

Engineman's Sweetie—"And do you always think of me during your long night trips?"

Engineman—"Do I? I've wrecked two trains that way already."

You darling!—TIT-BITS (London)

Allen Stewart, a clerk in the car accountant's office of the Missouri-Kansas-Texas, Parsons, Kan., received an unusual honor a month or two ago. At the convention of the National Federation of Music Clubs in Chicago, recently, Allen was picked as the best young male singer in the United States and awarded first prize.

To prove that some Irish are still railroaders, the Union Pacific calls attention to the Burke brothers of Nebraska, three of whom are locomotive engineers. W. R. Burke, 32 years' service, runs between Grand Island and Valparaiso, Albert R. Burke, 20 years' service, runs between Hastings and Kearney, and Elmer J. Burke, 23 years' service, runs between North Platte and Grand Island.

Most of us are inclined to imagine that railway athletics are a recent development, but a railway had a baseball team 33 years ago. In the horse and buggy days of '94, the Flint & Pere Marquette (one of the predecessors of the Pere Marquette) was well represented by a team composed entirely of its employees. Robert A. Reid, now master mechanic of the P. M., was a member of the team, and is of the firm opinion that it could have beaten any of the present railway baseball teams.

The champion commuter of the West has been found in the person of W. S. Taylor of San Jose, Cal. He will celebrate the beginning of his forty-sixth year as a daily commuter between San Jose and San Francisco on July 1. On that date in 1882, Mr. Taylor accepted a position as purchasing agent for a group of merchants in San Jose and made his first trip on Southern Pacific's Peninsula lines. Since then he has made the 50-mile journey back and forth every business day.

In Tasmania where the government owns the railways strenuous steps are being taken to oust the highway competitor, according to the Christian Science Monitor. The railways, for example, offer free motor service between the patron's home and the railway station. To reduce the competitive power of motor transport the state is divided into five zones and commercial highway carriers are required to take out a license for each zone. Furthermore, highway speed limits have been lowered to prevent motor vehicles from meeting or surpassing railway speed. Meantime railway service has been improved and speeded up. The measures taken are said to be producing the desired results.

Startling Instance of Decline in Passenger Traffic

"Sunman, Ind.—Five persons lost their lives when their automobile was struck by a big four-passenger train at a street crossing here."—News item noticed by Russel Crouse in his column in the New York Evening Post.

Homily

A good thing to remember
And a better thing to do
Is to work with the construction gang,
Not with the wreckin' crew.

LOCOMOTIVE ENGINEERS' JOURNAL.

The Dumbest Dining Car Waiter

Sam, the dumbest dining car waiter, has again sprung into the limelight. The other day a diner told him: "Waiter, I want pork chops with fried potatoes, and have the chops lean." To which Sam replied: "Yas, suh, which way, suh?"

Two days later the following conversation took place:

Diner: "Waiter, this coffee is like mud."

Sam: "Yas, suh, it was ground dis mawnin."

Any More Entries?

The Missouri-Kansas-Texas enters the competition in regard to railway families. It presents the five McGees, four brothers and a sister. The family is headed by H. E. McGee, vice-president and general manager; Fred McGee is traveling freight agent, with headquarters at Tulsa, Okla.; O. L. McGee is traveling special officer, with headquarters at Denison, Tex.; Horace McGee, the youngest of the brothers, is clerk in the local freight office at Dallas, where the sister, Miss Zedie McGee, is also employed as expense bill clerk.

Any Non-Stop Runs to Beat This?

Quite a controversy has been stirred up in the staid old London Times as to what is the longest non-stop railway run in England. Just at present the run from Paddington Station, London, to Plymouth, in the south of England, seems to be the longest accredited non-stop run, the distance being slightly over 220 miles. Since this line is equipped with track water-troughs for taking water without stopping, it is a really non-stop run. In this connection, it is rather interesting to speculate on what the longest non-stop run is in this country. Indeed the London, Midland & Scottish has announced a 236.3-mile run from Euston (London) to Carnforth in its summer schedule and the London & North Eastern will run the advance section of its famous "Flying Scotsman" from King's Cross to Newcastle, 268 miles, with no stops of any kind. What is the longest non-stop run in North America?

Out of Our Files

It is freely admitted that the following yarn is of exceedingly ancient vintage, says the Kalends of the Waverly Press (Baltimore), but it is a railroading story, and railroad men like their stories to be well seasoned with age.

It is a yarn which the late J. T. Harahan, president of the Illinois Central was fond of telling on himself.

Mr. Harahan was sitting in his office at Chicago one day when a burly person entered, without ceremony of knocking. "Me name's Casey," he said. "I want a pass to St. Louis. I wurrk in the yar-rds."

"That is no way to ask for a pass," said Mr. Harahan. "You should introduce yourself politely. Come back in an hour and try again."

At the end of the hour back came the caller. Doffing his hat he inquired.

"Are yez Mr. Harahan?"

"I am."

"Me name is Patrick Casey. I've been wurrkin' out in the yar-rds."

"Glad to know you, Mr. Casey. What can I do for you?"

"Ye can go to h——. I've got a job on the Wabash!"

NEWS *of the* WEEK

Union Pacific—Photo by A. C. Smith

THE AMERICAN CONCRETE INSTITUTE will hold its twenty-fourth annual convention at the Benjamin Franklin hotel, Philadelphia, Pa., on February 28 and 29 and March 1, 1928. The past four conventions have been held in Chicago.

THE DE AUTREMONT BROTHERS, Ray, Roy and Hugh, have each been sentenced to life imprisonment at Medford, Ore., for robbery of a Southern Pacific passenger train and the killing of four trainmen at the Siskyou tunnel in 1923.

THE INTERSTATE COMMERCE COMMISSION has announced additional extensions of time for the completion of automatic train-control installations as required by its second order (January 14, 1924), from July 1 to December 31, for the Long Island, Delaware & Hudson and Erie, and from July 1 to December 1 for the Chicago, Indianapolis & Louisville.

A TRAIN of new all-steel suburban passenger cars equipped with roller bearings was placed on exhibition by the Chicago, Rock Island & Pacific at the La Salle street station, Chicago, on June 29. The exhibit included models of the three types of roller bearings with which the coaches have been equipped—Hyatt, S. K. F. and Timken. Forty coaches have been equipped with roller bearings.

New Transportation Degree at Yale

For the first time in history Yale University has granted a degree of Master of Science in Transportation Engineering. The recipient was Edmond Smith McConnell, who received his B.S. degree from the University of Minnesota in 1924. Mr. McConnell, who is on the staff of L. K. Sillcox, general superintendent of motive power of the Chicago, Milwaukee & St. Paul, spent one year at Yale where he held one of the Strathcona fellowships in transportation. His master's essay was on the subject of the Oil-Electric Locomotive.

Cost of Coal

The average cost of coal used as fuel for road locomotives by Class I railroads in April was $2.66, as compared with $2.64 in April last year, according to the Interstate Commerce Commission's monthly summary of railroad fuel statistics. For the four months ended with April the average cost was $2.68, as compared with $2.63 last year. The average cost of fuel oil was 2.96 cents per gallon, as compared with 2.90 cents last year.

C. N. R. Net Down in May

Net earnings of $2,769,757.69 are shown in the operating statement of the Canadian National Railways for May. Increased operating expenses due to increases in the wages and to a large amount of maintenance-of-way work during the month are also shown. Both gross and net earnings for May show a decrease, as compared with the same month last year.

The summary for the month shows the following:

	1927	1926	Inc.
Gross.....	$22,864,398	$23,021,017	—156,619
Op. ex....	20,094,640	19,691,787	402,852
Net.....	2,769,757	3,329,230	—559,472
Op. ratio..	87.89%	85.54%	.....

The five months' summary follows:

	1927	1926	Inc.
Gross,....	$107,153,564	$102,346,994	—4,806,569
Op. ex....	93,729,341	88,816,840	4,912,501
Net.....	13,424,222	13,530,154	—105,932
Op. ratio..	87.47%	86.78%	.....

Railroads Reduce Debt to Government

Railroads have paid into the United States Treasury during the fiscal year ended June 30 a total of $89,316,810 in principal and interest on their indebtedness arising from the period of federal control and the loans made by the Interstate Commerce Commission afterward, according to figures made public by the department. This leaves a total of railroad indebtedness of $230,484,076. Of the amounts paid, $68,628,774 was on account of principal. The Boston & Maine liquidated its indebtedness under section 7 of the federal control act and section 207 of the transportation act, totaling $26,980,000; but it still has a loan of $21,705,000 under section 210. The Erie retired a debt of $8,725,000 under section 207 and one of $11,574,000 under section 210. Smaller payments were made by a large number of roads.

History on Table Ware in B. & O. Dining Cars

The Baltimore & Ohio, studying the history of the last century in connection with its coming centennial celebration, finds that Enoch Wood, of Burslem, England, a maker of chinaware, made two souvenir china plates in 1827, to mark the establishment of the Baltimore & Ohio Railroad, one showing a locomotive of the Rocket type and the other an inclined plane; and, acting on the idea suggested by these plates, the road has had made some china plates, platters and saucers for use in its "colonial" dining cars, all being of beautiful blue china and decorated with scenes illustrating the history of the road. A large platter showing a scene at Indian Creek on the line between Cumberland and Pittsburgh, has on its border 12 pictures of historic locomotives and cars. These scenes are reproduced from drawings which have occupied the time of three artists for nearly a year. The dinner plates, which bear a picture of Harper's ferry, are for sale on the company's dining cars at one dollar each.

Air and Railroad Transportation

L. A. Downs, president of the Illinois Central, in a recent newspaper interview expressed the opinion that air transportation at some time in the future might be co-ordinated with and carried on by railroads. He pointed out the fact that as the two forms of transportation are supplementary rather than competitive the traffic gathering organization of a railroad would be valuable to an air service conducted by the same company. "Notwithstanding the great progress that has been made it is felt that airplane development is not yet past the stage of experimentation," said Mr. Downs. "It is doubtful whether the railroads could contribute materially to the progress of its development. * * * But when the stage of experimentation is passed, and when there is good reason to believe that public confidence is forthcoming I believe we shall see the railroads not only willing but eager to throw the weight of their organizations and resources into the establishment of air

transportation on a sound commercial basis."

Pacific Coast Advisory Board

The Pacific Coast Transportation Advisory Board, at its quarterly meeting at Los Angeles, Cal., on June 16 and 17, appointed a special committee on aeronautical transportation, asking Col. Charles A. Lindbergh to accept the honorary chairmanship. The 400 men who attended the meeting instructed this committee to take steps to promote the use of the airplane in commercial transportation in California, Nevada, Arizona and New Mexico.

Oranges and lemons shipped from this territory during the first six months of 1927 showed an increase of 29 per cent over the shipments for the same period in 1926. Car requirements for oranges and lemons for the third quarter of 1927 are expected to be 17 per cent greater than for the third quarter of 1926. Petroleum and petroleum products will probably require 54,412 cars for movement, an increase, for the third quarter, of 14 per cent over 1926. Butter is expected to require 15 per cent more cars while canned goods will be no greater in volume than in 1926. The estimated cotton yield will represent a decrease of 72,000 bales from the 1926 crop. Total car requirements are expected to be from 2 to 5 per cent greater than for last year.

Florida Stop Law

"Stop, Look and Listen" is the literal requirement of a law which has been passed in the state of Florida and which stipulates that it shall go into effect on October 1, next. It applies to all persons operating motor vehicles on public roads and requires a full stop within 50 ft. and not less than 10 ft. from a railroad crossing; and the person must "then look in both directions along the track and listen for the approach of any locomotive, car or train of cars." The law, however, covers only what may be called country crossings; for an exception is made where there is a gate or a watchman; and of all tracks within an incorporated city or town. Furthermore, the law applies only to crossings which have been designated by the state road department as "dangerous."

The railroad is required to put up suitable sign boards on both sides of the track at these crossings, 200 ft. back; and the sign must be 40 in. by 50 in. and 10 ft. high. At night the sign must, by means of a suitable mirror, reflect the lights of motor vehicle headlights.

Every locomotive "crossing or attempting to cross" over a public highway covered by this act, must have a suitable whistle, which whistle must be blown in such a manner that the automobile driver who has compiled with the law "will likely be warned thereby."

Violation of this law (the first time) calls for a fine of not over two dollars and costs, or imprisonment not over two days; and the money collected by the court is to be divided between the officer who makes the arrest and the judge who tries the case; but second offenses are to be punished as for a misdeameanor under the general law.

Canadian Pacific Earnings Off In May

Net earnings of the Canadian Pacific Railway for May showed a decline of over $400,000 from the same month last year, while for the first time since last December a falling off is shown in gross. January started 1927 off with a net lower by $291,623 than January, 1926, but moderate increases in February, March and April had placed the road $35,509 ahead of the first four months of 1926 in net. The May decrease, however, was larger than the January decline and now places the company $381,736 behind the 1926 record.

This was, however, the second best gross showing for May that the system has ever made. Working expenses were $13,182,730, an increase of $138,848. The combination of decreased gross and increased expenses left net $417,245 below May at $2,031,630.

Gross for the first five months of this year is the highest the C. P. R. has ever shown for that period, and net, while below that for the 1926 period, is better than for any other corresponding five months since 1918.

Gross earnings, operating expenses and net profits for the month and the five months are compared in the following:

May	1927 $	1926 $	Inc. $
Gross	15,214,360	15,492,758	‡278,397
Oper. Exp.	13,182,730	13,043,881	138,848
Net	2,031,630	2,448,876	‡417,254
Five months:			
Gross	73,571,659	69,693,817	3,877,841
Oper. Exp.	62,823,812	58,564,234	4,259,577
Net	10,747,847	11,129,583	391,736

‡ Decrease.
x Decrease.

Following are the gross and net earnings for every month of this year:

	Gross	Net
January	$14,435,369	$1,510,234
February	13,367,502	1,968,198
March	15,433,137	2,984,194
April	15,121,289	2,253,588
May	15,214,360	2,031,630

N. Y. C. Plans 1704 Miles Automatic Train Control

The New York Central announces that contracts have this week been signed with the General Railway Signal Company for additions to the company's installation of automatic train control to provide this safeguard throughout its main line from New York to Chicago, 964 miles. Two divisions are already equipped. The main line of the Boston & Albany, 199 miles, is already equipped; and this, with installations now in service on the Big Four and the Michigan Central, will make a total of 1,704 miles of road with the automatic train control system of the General Railway Signal Company. The Pittsburgh & Lake Erie, 64 miles, already equipped with the intermittent inductive automatic train stop of the Union Switch & Signal Company, will bring it up to 1,768 miles.

The total number of locomotives equipped will be 2,450, which number includes 93 electric locomotives on the Electric division (New York to Harmon and New York to White Plains) and 336 multiple unit cars on the Electric division.

The Michigan Central installation is not quite completed but is expected to be wholly put in service by July 15. This installation terminates at Kensington, Ill., from which point the trains of the Michigan Central run over the Illinois Central, to and from Chicago.

The installations above referred to as now in service have been in operation since July of last year, and it is expected that the whole of the work now contracted for will be completed before January, 1928.

The detail items, in which are included the sections of road on which automatic train control is already in operation are shown below. Those items indicated by a star represent sections on which the apparatus went into service a year ago.

The figures showing mileage are subject to correction, as the present contract includes some work not on the main line. For example, the line between New York and Harmon is in the Electric division, but the contract calls for about 53 miles of electrified road, the Electric division including part of the road from New York to Chatham.

A. T. C. Mileage

From	To	Miles of Road	Locos.
N. Y. C.			
New York	Harmon	33	429
Harmon	Albany	110	175
*Albany	Syracuse	145	476
Syracuse	Buffalo	151	a
*Buffalo	Cleveland	181	373
Cleveland	Chicago	344	278
Total N. Y. C. proper		964	1,731
B. & A.			
*Boston	Albany	199	232
C. C. C. & St. L.			
*Indianapolis	St. Louis	235	90
Mich. Cent.			
*Detroit	Niles	191	238
Niles	Kensington	80	43
Total on N. Y. C. system		1,669	2,334
*Pittsburgh & Lake Erie		64	116
Grand Total		1,733	2,450

* Already in service.
a Included in 175, above; total, Eastern lines, 1,080.

A. A. E. Condemns Fake Engineering Correspondence Schools

The American Association of Engineers, meeting at Tulsa, Okla., on June 6, adopted resolutions condemning questionable practices found in correspondence schools. The resolution declared that schools offering extension courses, and especially those specializing in engineering and professional subjects, should be required to operate under supervision and regulation equal to that now prescribed by federal law and state statutes for resident schools and other institutions of higher education.

A report of the association's correspondence school committee, which is based on a national survey, states that there are four times as many students enrolled in these correspondence schools as are in attendance at all colleges and universities. A large number of the schools offer obsolete courses of study and training in shops equipped with out-of-date machinery. Eighty per cent of the schools are privately owned or controlled and among the total of more than three hundred are companies with a capitalization of $10,000,000, employing staffs of 3,000 persons, including sales forces. Members of the associa-

tion at the convention declared that such schools which undertake to develop an engineer in from three to six months, using the ability to pay for a course of study as the only requirement for entrance, have a tendency to lower the standard of the engineering profession.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings.

AIR BRAKE ASSOCIATION.—T. L. Burton, 165 Broadway, New York City. Annual convention, 1928, Detroit, Mich. Exhibit by Air Brake Appliance Association.

AIR BRAKE APPLIANCE ASSOCIATION.—Charles R. Busch, Buffalo Brake Beam Co., 32 Nassau St., New York. Meets with Air Brake Association.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—J. D. Gowin, 112 W. Adams St., Chicago.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 S. Michigan Ave., Chicago.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York. Next annual meeting, November 1, 1927, Havana, Cuba.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Room 400, Union Station, St. Louis, Mo.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—C. E. BELL, Seaboard Air Line, Washington, D. C. Next meeting, October, 1927, Chicago.

AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 292 Madison Ave., New York. Annual convention, Oct. 3-7, 1927, Cleveland Public Auditorium, Cleveland, Ohio.

AMERICAN RAILROAD MASTER TINNERS' COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borcherdt, 202 North Hamlin Ave., Chicago, Ill.

AMERICAN RAILWAY ASSOCIATION.—H. J. Forster, 30 Vesey St., New York, N. Y.

Division I.—Operating—J. C. Caviston, 30 Vesey St., New York.

Freight Station Section (including former activities of American Association of Freight Agents)—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., N. Y.

Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association)—J. C. Caviston, 30 Vesey St., New York.

Safety Section.—J. C. Caviston, 30 Vesey St., New York.

Telegraph and Telephone Section including former activities of the Association of Railroad Telegraph Superintendents.—W. A. Fairbanks, 30 Vesey St., New York. Next meeting, Oct. 4-6, The Willard, Washington, D. C.

Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting officers).—G. W. Covert, 431 South Dearborn St., Chicago.

Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York.

Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Annual meeting, March 6-8, 1928, Chicago. Exhibit by National Railway Appliances Association.

Construction and Maintenance Section.—G. H. Fritch.

Electrical Section.—E. H. Fritch.

Signal Section (including former activities of the Railway Signal Association).—H. S. Balliet, 30 Vesey St., New York. Next meeting, Sept. 13-15, 1927, Mount Royal Hotel, Montreal, Que.

Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Annual convention, June 13-20, 1928, Atlantic City, N. J. Exhibit by Railway Supply Manufacturers' Association.

Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago. Annual convention, Sept. 13-15, 1927, Hotel Kentucky, Louisville, Ky.

Division VI.—Purchases and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y.

Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill. Annual meeting, 1928, Detroit, Mich.

Car Service Division.—C. A. Buch, 17th and H St., N. W., Washington, D. C.

AMERICAN RAILROAD BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W., Ry., 319 N. Waller Ave., Chicago. Exhibit by Bridge and Building Supply Men's Association. Annual convention, October 18-20, 1927, Hotel Nicollet, Minneapolis, Minn.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—H. W. Byerly, General Immigration Agent, Northern Pacific, St. Paul, Minn. Annual convention, 1928, Miami, Fla.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—(Works in co-operation with the American Railroad Association Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Annual meeting, March 6-8, 1928, Chicago. Exhibit by National Railway Appliances Association.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—Margaret T. Stevens, Baltimore & Ohio R. R., Baltimore, Md.

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. & St. P. Ry., 11402 Calumet Ave., Chicago. Annual convention, Aug. 31, Sept. 1 and 2, 1927, Hotel Sherman, Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 1319-21 F St., N. W., Washington, D. C.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, Associate Mechanical Editor, *Railway Age*, 30 Church St., New York.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—E. J. Stocking, 111 West Washington St., Chicago. Next annual convention, Jan. 24-26, 1928, Montreal, Que.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreuccetti, C. & N., Room 413, C. & N. W. Station, Chicago. Annual meeting, Oct. 25-28, 1927, Hotel Sherman, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.

ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, 17th and H. Sts., N. W., Washington, D. C.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—D. A. Hultgren, secretary, Massey Concrete Products Co., 1328 McCormick Bldg., Chicago. Annual exhibit at convention of American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 129 Charron St., Montreal, Que.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, 514 East Eighth St., Los Angeles, Calif. Regular meetings, second Friday of each month, 514 East Eighth St., Los Angeles.

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—R. E. Giger, 721 North 23rd St., East St. Louis, Ill. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.

CENTRAL RAILWAY CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 2nd Thursday each month, except June, July, August, Hotel Statler, Buffalo, N. Y.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—(See Railway Car Department Officers' Association.)

CINCINNATI RAILWAY CLUB.—D. R. Boyd, 811 Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.

CLEVELAND RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings, first Monday each month, except July, August, September, Hotel Hollenden, Cleveland.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Next convention, August 16-18, 1927, Hotel Lafayette, Buffalo, N. Y. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.—W. R. Walsh, Ewald Iron Co., Louisville, Ky.

INTERNATIONAL RAILWAY FUEL ASSOCIATION.—L. G. Plant, 80 E. Jackson Blvd., Chicago. Annual convention, May, 1928, Chicago. Exhibit by Internationai Railway Supply Men's Association.

INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.—Wm. Hall, 1061 W. Wabash Ave., Winona, Minn. Annual convention, September 6-9, 1927, Chicago.

INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.—W. J. Dickinson, 189 W. Madison St., Chicago. Meets with International Railway Fuel Association.

MASTER BOILER MAKERS' ASSOCIATION.—Harry D. Vought, 26 Cortlandt St., New York.

NATIONAL ASSOCIATION OF RAILROAD TIE PRODUCERS.—E. A. Morse, vice-president, Potosi Tie & Lumber Co., St. Louis, Mo. Next annual convention, April 24-26, 1928, Arlington Hotel, Hot Springs, Ark.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—James B. Walker, 49 Lafayette St., New York. Annual meeting, October 17, 1927, Dallas, Tex.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. W. Kelly, 1014 South Michigan Ave., Chicago.

NATIONAL SAFETY COUNCIL.—Steam Railroad Section: J. E. Long, Superintendent Safety, D. & H., Albany, N. Y.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

NEW YORK RAILROAD CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Annual outing, Thursday, June 30, Travers Island, N. Y. Regular meetings 3rd Friday in month, except June, July and August.

PACIFIC RAILROAD CLUB.—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2nd Thursday in month, alternately in San Francisco and Oakland.

RAILROAD MOTOR TRANSPORT CONFERENCE.—R. H. Newcomb, 492 South Station, Boston, Mass.

RAILWAY ACCOUTING OFFICERS ASSOCIATION.—E. R. Woodson, 1116 Woodward Building, Washington, D. C.

RAILWAY BUSINESS ASSOCIATION.—Frank W. Noxon, 1406 Packard Bldg., Philadelphia, Pa. Annual meeting, November, 1927, Hotel Commodore, N. Y.

RAILWAY CAR DEPARTMENT OFFICERS' ASSOCIATION.—A. S. Sternberg, Belt Ry. of Chicago, Polk and Dearborn Sts., Chicago. Annual convention, August 23-25, 1927, Hotel Sherman, Chicago. Supply Men's Association.—B. S. Johnson, W. H. Miner, Inc., 209 S. La Salle St., Chicago.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.—Edward Wray, 9 S. Clinton St., Chicago. Meets with Association of Railway Electrical Engineers, Oct. 25-28, Hotel Sherman, Chicago.

RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.—F. W. Venton Crane Co., 836 S. Michigan Ave., Chicago. Meets with Traveling Engineers' Association, September, 1927.

RAILWAY FIRE PROTECTION ASSOCIATION.—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 11-13, 1927.

RAILWAY REAL ESTATE ASSOCIATION.—C. C. Marlor, 1243 Transportation Bldg., Chicago.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa., Meets with Mechanical Division and Purchases and Stores Division, A. R. A.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Division I.

RAILWAY TREASURY OFFICERS' ASSOCIATION.—L. W. Cox, 1217 Commercial Trust Bldg., Philadelphia, Pa. Annual meeting, Sept. 1-3, 1927, Detroit, Mich.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual convention, September 20-22, 1927 Buffalo, N. Y. Exhibit by Track Supply Association.

ST. LOUIS RAILWAY CLUB.—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.

SIGNAL APPLIANCE ASSOCIATION.—F. W. Edmunds, West Nyack (Rockland Co.), N. Y. Meets with A. R. A., Signal Section.

SOUTHEASTERN CARMEN'S INTERCHANGE ASSOCIATION.—Clyde Kimball, Inman Shops, Atlanta, Ga. Meets semi-annually.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3rd Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—R. G. PARKS, A. B. & A. Ry., Atlata, Ga.

TRACK SUPPLY ASSOCIATION.—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association, September, 1927.

TRAVELING ENGINEERS' ASSOCIATION.—W. O. Thompson, Gen. Supt. R. S., New York Central, Buffalo, N. Y. Annual meeting, September 13-16, 1927, Hotel Sherman, Chicago. Exhibit by Railway Equipment Manufacturers' Association.

WESTERN RAILWAY CLUB.—J. W. Fogg (treasurer), vice-pres. of MacLean-Fogg Lock-Nut Co., 2649 N. Kildare Ave., Chicago. Regular meetings, 3rd Monday each month, except June, July and August.

Traffic

The New York, Westchester & Boston announces that, beginning July 2, the eastern division, terminating at Mamaroneck, N. Y., will be extended to Harrison, N. Y., two miles farther east.

The Chesapeake & Ohio, in co-operation with the state and various civic interests, is entertaining, for a week, 200 boys and girls at St. George's farm, Virginia, on the James river, near Jamestown, where a short instruction course in agriculture is being given.

The Interstate Commerce Commission has denied a petition filed by the Mississippi Railroad Commission for a re-opening of Ex Parte 74, the 1920 general rate advance case, for the purpose of determining the propriety of redistricting southern territory as to rate-making groups.

The "All-Texas Good Will Special" is now on a two weeks' tour of the middle west and east. It carries 118 Texas business and professional men, and is visiting St. Louis, Kansas City, Chicago, Cleveland, Ohio, Buffalo, Boston, New York, Washington and Philadelphia. Dan Moody, governor of Texas, is a member of the group.

Fast freight service has been inaugurated between Peoria, Ill., and St. Louis, Mo., over the Chicago & Illinois Midland, the Chicago, Springfield & St. Louis and the Alton & Eastern. Trains leave St. Louis at 10 p.m. arriving at Peoria at 2 p.m. the following day, and leave Peoria at 10:30 a.m. reaching St. Louis at 2:30 a.m. the following day.

"Summer in New England" is the title of the pamphlet issued for the current season by the Boston & Maine describing the summer resorts of Maine, New Hampshire, Vermont and Massachusetts. The illustrations include a number of new pictures and the text is admirably condensed. Its pages are only 4 in. x 6 in., making a book that can readily be carried in the coat pocket.

The Illinois Central on June 26 increased the number of week-day passenger trains operated on its electrified suburban lines between Chicago and South Chicago, Blue Island and Matteson from 485 to 542. Express trains between the business district and the territory from which the greatest amount of traffic is drawn, from Hyde Park to Woodlawn, are now run at intervals of 10 min. instead of intervals of 15 min. from 9 a. m. to 5 p. m.

The Interstate Commerce Commission has suspended from July 1 to February 1, 1928, tariffs which proposed to eliminate arrangements for "off-track station" receipt and delivery of freight through transfer companies at St. Louis and East St. Louis, except that certain stations, principally of the Columbia Transfer Company, would be continued for the handling of l.c.l. freight. It was further proposed to reduce the allowances to transfer companies on constructive deliveries.

"The Confederation" is the name of a new train placed in service on the Canadian National on Friday, June 24, to be operated between Toronto, Ont., and Vancouver, B. C. Westbound the train leaves Toronto at 9 p.m. and arrives in Vancouver at 3 p.m. on the fifth day. Eastbound the train leaves Vancouver at 9:30 a.m. and arrives in Toronto at 7:40 a.m. on the fifth day. On this train from Winnipeg, on its first trip, there were about 30 Chicago newspaper men, guests of the railroad, on an excursion from Chicago to Minaki, Ont., to participate in the opening of its new inn at the Minaki fishing and summer resort. The party left Chicago on Friday evening, June 24.

The next hearing in connection with the Interstate Commerce Commission's investigation of rates on grain and grain products in the western district and for export, —Part 7 of its rate structure investigation and related cases—will be held at Wichita, Kan., beginning on July 11 before Commissioner Meyer and Examiners Mackley and Hall. Further assignments will be announced at the conclusion of the Wichita hearing. The issues arise under the Hoch-Smith resolution, as well as under the interstate commerce act, and include the reasonableness of the rates, as well as their relationships. Later hearings on various aspects of the cases will be held at Minneapolis, Chicago and points on the Pacific Coast.

I. C. C. Rate Cases

The Interstate Commerce Commission is to begin at Chicago on August 29, hearings in connection with its investigation of rates on livestock in the western district. The hearing will be before Examiners Stiles and Parker. Announcement will be made later of the dates and places of further hearings in the western district.

The Interstate Commerce Commission has announced Part 11 of its rate structure investigation, involving rates in the Southwest on sand, gravel, crushed stone and shells. Petitions have been filed by the Louisiana Public Service Commission, the Louisiana Highway Commission and the Arkansas State Highway Commission, asking that the federal commission investigate the rates on these commodities between certain points in the Southwest, and the commission has decided to assign them for hearing with other related cases, at dates and places to be announced later.

Northwest Shippers' Advisory Board

Increased movement of all agricultural products in the territory covered by the Northwest Shippers' Advisory Board was forecast for the third quarter of 1927 at a meeting of that group held on June 16 at Missoula, Mont. Representatives of the Chicago, Burlington & Quincy, the Great Northern, the Chicago, Milwaukee & St. Paul and the Northern Pacific assured the shippers that a sufficient number of cars will be available to handle the crops. E. J. Polleys of Missoula was elected chairman of the organization and Frank Venable of Butte, Mont., was elected secretary.

New P. R. R. Perishable Freight Station in Philadelphia

The Pennsylvania Railroad gave a luncheon in Philadelphia on July 1, to about 1,000 guests—city and other public officials, merchants and friends of the railroad—the occasion being the opening of the large new fruit and produce terminal which the road has just completed at Delaware and Oregon Avenues, Philadelphia. Among the guests were shippers from Oregon, California, Florida, Texas and other distant parts. This terminal, devoted exclusively to the fruit and vegetable trade, includes two buildings each 800 ft. x 110 ft., and a team track delivery yard with a capacity of 510 cars. A mammoth cold storage warehouse is under construction.

Freight Commodity Statistics, First Quarter

The Interstate Commerce Commission's statement of freight commodity statistics gives the following comparison, by general groups of commodities, of the tonnage transported during the first quarter in 1927, with the corresponding period in 1926:

Three Months Ending with March

Groups of Commodities	Tons originated—Quarter to March 31, 1927	Tons originated—Quarter to March 31, 1926	P.c. incr. 1927 over 1926
Products of agriculture	25,506,056	24,418,779	4.45
Animals and products	6,177,068	6,252,932	*1.21
Products of mines	165,897,128	144,777,582	14.59
Products of forests	25,587,387	27,183,932	*5.87
Manufactures and miscellaneous	67,679,317	67,887,329	*.31
All L.C.L. freight	9,068,709	9,479,425	*4.33
Total	299,915,665	279,999,979	7.11
	Total tons carried		
Products of agriculture	52,585,844	51,212,878	2.68
Animals and products	10,927,213	11,138,811	*1.90
Products of mines	308,959,725	276,639,479	11.68
Products of forests	48,419,354	50,514,110	*4.15
Manufactures and miscel'aneous	131,095,949	131,371,486	*.21
All L.C.L. freight	15,522,928	16,135,772	*3.80
Total	567,511,013	537,012,536	5.68

* Decrease.

Central Western Shippers' Advisory Board

The Central Western Shippers' Advisory Board held its thirteenth regular and fifth annual meeting at Casper, Wyo., on June 23, with nearly 300 shippers and railroad representatives in attendance. The commodity committees reported that the estimated increases in car requirements for the third quarter of 1927 as compared with the same period of 1926 by states would be as follows: Colorado, 6 per cent; Idaho, 6.7 per cent; Nebraska, 2.9 per cent; Utah, 3.5 per cent; Wyoming, 2.1 per cent. Bankers in the central western territory reported excellent business conditions in that area.

Will H. Gibson, chairman of the Idaho

Public Utilities Commission, was elected general chairman of the board to succeed H. G. Taylor, who has been appointed manager of public relations of the car service division of the American Railway Association. John E. Curtiss, a member of the Nebraska State Railway Commission, was elected general secretary. Twin Falls, Idaho, was selected as the point for the next quarterly meeting on December 8.

Fred W. Sargent, president of the Chicago & North Western, delivered an address on "Post War Conditions" in which he stated that the present trend among western railroads is to bend all their energies toward the encouragement of agricultural and industrial development.

New York-Pacific Coast Airplanes for Passengers

The Boening Air Transport, which now has the contract for carrying United States air mail between Chicago and San Francisco, announces that within a short time, probably by August 1, the airplanes of the company will be prepared to carry passengers; and it is expected that arrangements will be made with the National Air Transport, which will carry the mail east of Chicago, for transportation of passengers through between New York and San Francisco. The Boening airplanes will be equipped so as to carry two passengers and mail and baggage, within a maximum load of 1600 pounds.

The company expects to put in service, at the outset, 25 planes, capable of traveling at 130 miles an hour.

Western Trunk Line Class Rates Hearings

Hearings on Western trunk line class rates, I. C. C. Docket 17,000, part 2, ex parte 87, were resumed at St. Paul, Minn., on June 20, before Examiners William J. Kobel and Peter C. Paulson. E. M. Hendricks, traffic expert of the North Dakota Board of Railroad Commissioners, declared that North Dakota is discriminated against by present rates in favor of Minnesota and South Dakota. T. A. Durrant, traffic expert of the Grand Forks (N. D.) Commercial club, contended that railroads are not warranted in charging higher rates for hauling freight into and through North Dakota than in Minneosta and South Dakota and that rates from many points outside the state to Grand Forks should be reduced to remove discrimination against that city. Opposing the claims of carriers that operating costs are higher in North Dakota because of unfavorable weather conditions Mr. Durrant submitted exhibits from official records tending to show that North Dakota has less snow and rain than Minnesota, that the average velocity of the wind each month in the year is less and that the mean temperature is only slightly lower in North Dakota than in Minnesota.

The case of the Iowa Board of Railroad Commissioners against the proposed increase in rates was presented under the direction of Judge J. H. Henderson, commerce counsel for that body. C. A. Hanson, traffic director of the Waterloo (Iowa) Chamber of Commerce, pointed out that truck rates between Waterloo and other Iowa cities are lower than railroad rates and include pickup service and delivery. This testimony concerning motor trucks as well as the statement by Mr. Hanson that motor transport lines operating in the vicinity of Waterloo are conducting their businesses at a profit under present rates was allowed to stand in spite of objection by counsel for the carriers.

Roads in Good Condition for Western Crops

The railroads in the middle west are in good condition to handle this year's crop movement, the Car Service Division of the American Railway Association announces.

On June 28, over 50,000 box cars were in storage for grain loading on various roads in the winter and spring wheat territory, as compared with approximately 38,000 a year ago. At the same time there were ten per cent fewer western-owned box cars on eastern and southeastern roads than at this time one year ago. Under standing rules of the Car Service Division, the eastern and southeastern roads are constantly returning the western-owned box cars to their home lines as rapidly as possible, with the result that approximately 750 empty box cars are passing westward through Chicago and St. Louis daily.

Since the heavy crop movement of 1924, western roads have installed nearly 65,000 new and rebuilt box cars, of which number approximately 25,000 were on southwestern lines and 20,000 each on northwestern and central western lines. As a result of this policy of replacing old and wornout cars, 26.6 per cent of the box-car equipment on the southwestern lines, 10.5 per cent of the central western roads' box-car ownership and 11.3 per cent of the northwestern lines' ownership is now within the past three years.

The average carrying capacity of the box cars owned by the western roads today is 40.1 tons, as compared with 38.6 tons three years ago.

"Special efforts," said L. M. Betts, manager of the closed car section of the Car Service Division, in a letter to the railroads, "should be made by all roads during this season to secure full efficiency in the use of box cars. Last year thousands of box cars were loaded out of western territory, particularly with flour and other mill products, carrying only fifty or sixty per cent of fair loading capacity. The circumstances in many of these cases indicate that it was due, not so much to insistence on the part of receivers for minimum loads but to routine handling on the part of shippers who had not been impressed with the importance of heavy loading. Our handling indicates that consignees with a heavy continuous inbound movement have almost invariably, upon solicitation, agreed to cooperate by the acceptance of heavier loaded cars. Roads and members of the advisory boards in eastern territory can be of material assistance by developing, with receivers in that territory, opportunities to have inbound traffic loaded in maximum car lots, thus reducing the number of car units required for handling box-car traffic from the west."

Equipment and Supplies

Locomotives

THE GREAT NORTHERN is inquiring for one snowplow.

THE PENNSYLVANIA has ordered 25 K-4-s type locomotives from its Altoona shops.

THE AMERICAN RAILROAD OF PORTO RICO has ordered one consolidation type locomotive from the Baldwin Locomotive Works. Inquiry for two locomotives was reported in the *Railway Age* of April 30.

THE NEW YORK CENTRAL has ordered 11 locomotive tenders from the American Locomotive Company. One of these tenders will have a capacity of 12,500 gal., for service on the New York Central and 10 will have a capacity of 15,000 gal., for service on the Cleveland, Cincinnati, Chicago & St. Louis.

Freight Cars

THE FRUIT GROWERS EXPRESS is inquiring for 300 steel underframes.

THE SOUTH AFRICAN RAILWAYS are inquiring through the car builders for 50 bogie fruit wagons.

THE ANGLO-MEXICAN PETROLEUM COMPANY is inquiring for 15 high-side gondola cars of 40 tons' capacity and 15 box cars.

THE CARNEGIE STEEL COMPANY has given a contract to the Pressed Steel Car Company for making repairs to 150 steel hopper cars.

THE PACIFIC GREAT EASTERN has ordered 10 air dump cars of 20 cu. yd. capacity, from the Western Wheeled Scraper Company.

THE DENVER & SALT LAKE has ordered six all-steel automatic air dump cars of 30 cu. yd. capacity, from the Western Wheeled Scraper Company.

THE FORT WORTH & DENVER CITY has ordered two all-steel automatic air dump cars of 20 cu. yd. capacity, from the Western Wheeled Scraper Company.

THE NEW YORK CENTRAL has ordered 10 special flat cars from the Standard Steel Car Company. Five of these are to have a capacity of 82 tons, and five a capacity of 92 tons.

THE LEHIGH & NEW ENGLAND has ordered 200 A. R. A. all-steel box cars of 50 tons' capacity, from the Pressed Steel Car Company. Inquiry for this equipment was reported in the *Railway Age* of April 23.

Passenger Cars

THE NEW YORK, NEW HAVEN & HARTFORD is inquiring for 15 steel underframes for baggage cars.

THE ATCHISON, TOPEKA & SANTA FE has ordered one combination passenger and baggage, 73 ft., gas-electric rail motor car from the J. G. Brill Company.

THE NEW YORK CENTRAL has ordered four business cars from the Pullman Car & Manufacturing Corporation. This road placed a previous order for four business cars with the same builder.

Iron and Steel

THE BALTIMORE & OHIO has ordered 150 tons of I-beam spans for service at various places, from the American Bridge Company, and is now inquiring for 335 tons for a bridge at Lovett, Ind.

THE CENTRAL OF NEW JERSEY is inquiring for 133 tons of steel for an engine house, boiler shop, machine and forge shop at Bethlehem, Pa. This road has ordered 120 tons of steel for a bridge at West Side avenue, Jersey City, N. J., from the Bethlehem Steel Company.

Machinery and Tools

THE NORTHERN PACIFIC has ordered a 42-in. by 24-ft. heavy lathe from the Niles-Bement-Pond Company.

Signaling

THE PENNSYLVANIA has ordered from the Union Switch & Signal Company, equipment for the installation of the coded continuous automatic train stop system on 25 locomotives, the fitting to be done at the Pennsylvania shops at Altoona.

THE ATLANTIC COAST LINE has ordered from the Union Switch & Signal Company an electro-mechanical interlocking, 12 levers, for Kaley avenue, Orlando, Fla.; also 18 semaphore signals, style S, and other material for installation between Orlando, Fla., and Winter Park.

THE ERIE has ordered from the General Railway Signal Company material for automatic train control on its Susquehanna division—315 track inductors and 40 locomotive equipments. This second order will complete automatic train control over the Delaware and Susquehanna divisions.

THE SEABOARD AIR LINE has contracted with the Union Switch & Signal Company for the installation of automatic block signals between Starke, Fla., and Coleman, Fla., 96 miles. The work will include 160 color light signals, style R. The arrangement is the APB system, similar to that recently installed on this road in Virginia, North and South Carolina, for 435 miles.

THE NEW YORK CENTRAL has contracted with the General Railway Signal Company for the installation of all-electric car retarders in the westbound classification yard at Selkirk, N. Y., near Albany, where freight is transferred to and from the Boston & Albany. The order includes 32 retarders and 12 skates, to be operated from three towers. The yard already is equipped with G. R. S. model six switch machines.

Supply Trade

Laurence R. Wilder has resigned as president of the **American Brown Boveri Electric Corporation,** effective July 1.

The Massachusetts Mohair Plush Company has removed its Boston, Mass., office from 200 Devonshire street to the Chamber of Commerce building 80 Federal street.

The Service Caster & Truck Company, Albion, Mich., manufacturer of trucks and trailers for freight stations and warehouses, has appointed **Claude A. Lyon** assistant sales manager in charge of railroad sales with offices in the Tribune Tower, Chicago. Mr. Lyon graduated from a course in electrical engineering at Rose Polytechnic Institute, Terre Haute, Ind., in 1914, and immediately thereafter entered railway service in the signal department of the

C. A. Lyon

Chicago, Rock Island & Pacific. He served in the signal department of this railroad and as an estimator in the signal department of the Illinois Central until 1917 when he became general signal inspector of the Nashville, Chattanooga & St. Louis, with headquarters at Nashville, Tenn. After service in France during the world war as a lieutenant in the Twenty-seventh engineers Mr. Lyon was appointed office engineer in the signal department of the Wabash at Decatur, Ill. In 1919 he joined the staff of the Regan Safety Devices Company, engaging in train control work, where he remained until he was appointed to the sales organization of the Service Caster & Truck Company in March.

L. C. Hensel, formerly sales representative of the Edison Storage Battery Company at Chicago, has been appointed sales engineer of the **Gould Car Lighting Corporation,** with headquarters at Chicago.

W. B. Murray, vice-president and chief engineer of the **Miller Train Control Corporation,** has been appointed also sales engineer of the company, and will hereafter devote the major part of his time to bringing the Miller devices to the attention of the railroads.

American Car & Foundry Company

The annual report of the American Car & Foundry Company for the fiscal year ended April 30, 1927, shows net earnings for the company and its wholly owned subsidiaries amounting to $4,593,377, equivalent after allowance for the 7 per cent preferred dividends, to $4.15 a share on 600,000 shares of no-par-value common stock. Net earnings last year were $6,102,898 or $6.67 a share. The company is paying $6 a share on its common stock. The earnings for the year fell short of the amount necessary for the payment of this dividend but President W. H. Woodin says in his annual report that in view of the company's sound financial condition, the directors felt that the surplus might with safety and propriety be drawn upon for such difference. President Woodin treats of present conditions in the equipment market in his remarks to stockholders as follows:

Purchases by the railroads of new freight car equipment during the year have been in disappointingly small volume.

Naturally, this inactivity in buying brought with it a competition even more keen than usual among the car-building concerns bidding for the business offered—with the result that the profit-margin, none too broad at the best, was still further narrowed. Fortunately, the Company, through the use of its facilities in the manufacture and sale of miscellaneous products and the returns produced by the investment of capital that, because of the paucity of equipment purchases, would otherwise have remained idle, has been able to show earnings in excess of what would have been possible had its activities been confined entirely to supplying the demands of the roads for new equipment.

In the president's letter to the stockholders, of June 22, 1926, it was said that "undoubtedly there is need of additional equipment if they" (the railroads) "are to discharge adequately their functions as carriers of the products of the country's industry." That statement was true with respect to the conditions then, and is true with respect to the conditions now, existing. The financial condition of the roads generally is such as to make it possible for them to supply their needs. It may be that some of them, at least, will defer doing so until final decision is reached with respect to one or more of the consolidations or mergers which for some time past have been, and still are, under consideration and negotiation.

It is, of course, impossible for the company to accelerate the resumption by the roads of equipment purchases. While, however, keeping itself fully prepared to meet such demand when it comes, the company is developing a field for its activities and the utilization of its experience and facilities more varied than that offered by the building of freight and passenger cars of the ordinary type, but nevertheless lying within the general domain of transportation and therefore calling for no departure from the underlying purposes of the company's organization. This particular field of endeavor is the manufacture and sale of automotive vehicles—motor buses, motor trucks and motor-driven rail cars—instrumentalities the development of which as supplementary to the service given by the established steam and electric railways will undoubtedly solve many of the problems which have long confronted railroad management in various sections of the country. This subject was touched upon in the report to the Stockholders at the close of the preceding fiscal year—and since that time the Company has proceeded earnestly and diligently along the lines indicated.

Selected items from the income statement follow:

	1927	1926
Earnings from all sources for the fiscal year ended April 30—before deducting repairs, renewals,		

etc., as noted hereunder— and after making provision for taxes	$7,837,528	$9,274,572
Less: Renewals, repacements, repairs, new patterns, flasks, etc.	3,244,151	2,171,673
Net earnings	$4,593,377	$6,102,898
Less: Dividends— Preferred, 7 per cent.	2,100,000	2,100,000
Common, 6 per cent.	3,600,000	3,600,000
Total dividends	$5,700,000	$5,700,000
Balance after dividends	Def. $1,106,623	$402,898

Obituary

Reuben E. Butrick, office manager of the Kerite Insulated Wire & Cable Company, Inc., New York, died on June 23, at his home in Brooklyn, N. Y.

Charles W. Bryan, since 1911 chief engineer of the American Bridge Company, New York, died on June 25 in the New Rochelle, N. Y., hospital. Mr. Bryan had been in charge of the engineering work for the American Bridge Company on all the principal structures fabricated and erected by the company. He was born at Washington, Mo., in 1863, and was graduated in civil engineering from Washington University, St. Louis, in 1884, and in 1905 was given the honorary degree of master of arts. After leaving college he was associated from 1884 to 1887 as a draftsman with C. Shaler Smith, St. Louis, a well known bridge engineer and the

C. W. Bryan

Edge Moor Iron Company, Wilmington, Del., except that for a few months he was an engineer in the bridge department of the Missouri Pacific. He served as engineer of the designing and estimating office of the Edge Moor Bridge Works and later as chief engineer until the Edge Moor Company became part of the American Bridge Company. He then went to Pittsburgh in charge of contracting for railroad and highway bridges in that district, and in 1901 was transferred to New York as eastern division contracting manager. In 1906, he was appointed chief engineer of the American Bridge Company of New York, also retaining his previous position. In February, 1911, he was appointed chief engineer of the American Bridge Company, which position he held at the time of his death.

Construction

BALTIMORE & OHIO.—This road plans to build a 335-ton bridge on its line at Lovett, Ind.

BALTIMORE & OHIO.—The work being done for this road by the Empire Construction Company, of Baltimore, Md., and the Vang Construction Company, of Cumberland, Md., involving the double-tracking of the line at Point of Rocks, Md., Harpers Ferry, is about half completed, according to the reports of the contractors. The Empire Construction Company was given a contract for diverting the course of a creek and filling work, in anticipation of the building of a new yard at Cincinnati, O. It is reported that the Baltimore & Ohio expects to ask for bids on a bridge at Barnesville, O.

CANADIAN NATIONAL.—This road has given a contract to the Cooke Construction Corporation, of Montreal, for building a line from St. Felicien, Quebec, to Mistassini river, a distance of 27 miles.

CANADIAN PACIFIC.—A contract has been let for the construction of a 2,000,000-bu. addition to the grain elevator at Port McNicoll, Ont., which will include necessary working house facilities.

CANADIAN PACIFIC.—This road has let a contract to the Dominion Construction Company for a nine-mile double-track line diversion, extending from Esher to Healy. Esher is nine miles west of Chapleau, Ont., on the Algoma district.

CENTRAL OF NEW JERSEY.—This road will build a 120-ton steel bridge at West Side avenue, Jersey City, and has ordered the bridge from the Bethlehem Steel Company. The road plans to build an engine house, boiler shop, machine and forge shop at Bethlehem, Pa. Bids have been asked on the engine house, under specifications for six stalls, but it is planned to increase specifications to 16 stalls.

CHESAPEAKE & OHIO.—This road plans to build 7 small bridges in connection with grade elimination and track elevation work being carried out at Covington, Ky.

CHICAGO, ROCK ISLAND & PACIFIC.—A contract for the construction of a water treating plant at Kansas City, Kan., has been let to Joseph E. Nelson and Sons, Chicago. A boiler washing plant at Hulbert, Ark., will be constructed for this company by the F. W. Miller Heating Company, Chicago. A contract has been awarded to the Howlett Construction Company, Moline, Ill., for the construction of frame mechanical coaling stations at Iowa Falls, Iowa, and Mineola, Kan.

ERIE.—This road has awarded a contract for the construction of paving, curbing and drainage at its Monmouth street yards in Jersey City to George W. Rogers & Co., of New York, in connection with its extension of team tracks at that yard. There is from 2,500 to 3,000 ft. of paving and curbing to be laid. This company has let a contract to the Newhall Construction Corporation, of Cleveland, O., for the building of a stock-feeding station at Buffalo, N. Y. The work involves the building of pens, 500 ft. long by 150 ft. wide, and also feed barns and a small office building. The cost of the work will be around $100,000.

GREAT NORTHERN.—This company has filed with the Interstate Commerce Commission applications for authority to assume the obligation of the Oregon Trunk under the commission's certificate and order to build the proposed line from Bend to Paunina, Ore., and also for authority to operate under an agreement with the Southern Pacific and Central Pacific over their Natron cut-off from Paunina to Klamath Falls, Ore., and a track of its own serving industries in Klamath Falls and connecting with the terminals of the Oregon Trunk. A joint application was also filed by the Great Northern and the Oregon Trunk asking that the latter be relieved of its obligation to build the line under the commission's order. The Great Northern proposes to use a somewhat different route from that proposed by the Oregon Trunk operating over a logging road of the Shevlin-Hixon Company for 25 miles south of Bend, in which it proposes to buy a three-fourths interest for $375,000.

LEHIGH VALLEY.—This road is planning to build a 120-ton bridge at Mountain Top, Pa.

MISSOURI PACIFIC.—This company has purchased a grain elevator of 460,000-bu. capacity at Omaha, Neb., which will be enlarged to a total capacity of 1,000,000-bu. After enlargement and reconstruction, contract for which is expected to be awarded before July 5, the elevator will be operated by the Nye and Jenks Grain Company, Omaha.

NEW YORK CENTRAL.—Bids closed, June 28, for work on the new office building at 46th street and Depew place, New York. The contract for laying foundations was held by James Stewart & Co., of New York, and the work has been completed. The new office building will be 38 stories in height, with a tower, and is to cost about $10,000,000. Bids were closed at the same time for work on a roadway through the building, to be constructed under separate contract. Bids will close on July 8 for the building of a new passenger station at Buffalo, N. Y., to cost around $4,000,000. Louis Chevalier & Co., which has been awarded the contract for the construction of a sub-station at Hastings-on-the-Hudson, N. Y., to cost about $55,000, has completed the foundation and began the erection of steel structure this week. Bids closed on June 28 for the construction of an overhead roadway for automobile traffic along the east side of the Grand Central terminal in New York. Bids closed on June 28 for the construction of

a foundation for a 20,000-k.w. generating plant at Glenwood, N. Y.

NEW YORK, WESTCHESTER & BOSTON.—This road has awarded a contract to Dwight P. Robinson & Co., of New York, for double-tracking its line from Harrison to Rye, N. Y. The line is to be all electric and work is to be completed within a year.

NORTHERN PACIFIC.—This company plans the construction of a one-story brick and concrete power plant, with outside dimensions of 50 ft. by 100 ft., at Mandan, S. D. Including a coal trestle and concrete stack. This plant will cost about $140,000. Authority has also been received for rebuilding 14 stalls of the roundhouse at Glendive, Mont. The new stalls will be constructed of brick, timber and concrete, 135 ft. deep, and will involve an estimated expenditure of $140,000.

PANHANDLE & SANTA FE.—The Interstate Commerce Commission has authorized this company to construct an extension from White Deer to a point 21 miles northwest thereof, in Carson and Hutchinson counties, Tex.

PENNSYLVANIA. — This company will build a steel cab ramp at its New York City terminal. The ramp will run to about 350 tons, which have been ordered from the American Bridge Company.

SOUTHERN.—This road plans to build a 400-ton steel bridge over the Coosa river, in Alabama.

SOUTHERN PACIFIC.—A contract for the construction of combined passenger and freight stations at Elsa, Tex., Azahar, LaVilla, Santa Rosa and Sauza and two section house layout at Elsa has been let to the Ware Company, El Paso, Tex., at a total cost of about $60,000. The same contractor will construct a passenger station at Edinburg, Tex., at an expenditure of $40,000. A contract for the construction of combined passenger and freight stations at Linn, Tex., Barrosa, Rachal, Solino, Dix, Alsonia and East Alsonia; section house layouts at Linn, Rachal and Edinburg; agents' residences at Linn and Rachal; 20-car stock pens at Linn and Rachal; 30-car stock pens at Barrosa and Solino; a 25-car stock pen at Hartland, Tex., involving a total expenditure of $120,000, has been awarded to R. W. Abbott, McAllen, Tex. Produce warehouses will be constructed at Azahar and Primera, Tex., at a cost of $4,150 and $4,000 respectively by Worden and Henry, Harlingen, Tex., and at Elsa, LaVilla and Santa Rosa, at a total cost of $12,000 by William D. Uecker. A yardmaster's office at Edinburg will be constructed by the Thomas W. Blake Lumber Company, Houston, Tex., at a cost of $1,500. All of these structures are located on the recently completed Rio Grande Valley extension.

A BAND composed of employees of the Denver & Rio Grande Western at Salt Lake City, Utah, has been presented with the Pyeatt trophy, which is awarded by that railroad each year to the winner of the system band contest.

Railway Finance

ALABAMA, TENNESSEE & NORTHERN.—*Bonds Authorized.*—The Interstate Commerce Commission has authorized this company to issue $1,187,000 prior lien 6 per cent bonds to be sold at 91½. The issue includes $1,000,000 bonds presently authorized and $187,000 bonds now in the company's treasury. The proceeds of the issue will be used in connection with the recently authorized extension of the company's line from Calvert, Ala., to Mobile, and improvement of the present line.

ATCHISON, TOPEKA & SANTA FE.—*Extra Dividend.*—Directors on June 28 declared an extra dividend of 75 cents a share, payable September 1, to stockholders of record July 22, this being the third extra dividend of this amount in successive quarters on this issue. Regular dividends total 7 per cent annually.

DELAWARE & HUDSON.—*Proposed Lease of B. R. & P.*—The Interstate Commerce Commission has postponed to a date hereafter to be fixed the oral argument set for July 9, on this company's application for authority to acquire control by lease of the Buffalo, Rochester & Pittsburgh and to operate under trackage rights over a line of the Pennsylvania, connecting the two. Argument had been had on the original application but the case was reopened after the supplemental application covering the trackage right proposal.

GREAT NORTHERN.—*Oregon Lines.*—This company has furnished a new development in the long controversy regarding proposed construction of new lines in south central Oregon, by filing with the Interstate Commerce Commission four applications. One of these is for authority to acquire a one-half stock interest in the Oregon, California & Eastern, from Klamath Falls to Sprague River Landing, Ore., about 50 miles, by purchase from the Southern Pacific at its cost to the Southern Pacific, estimated at from $900,000 to $1,000,000. The other applications ask authority to substitute the Great Northern for the Oregon Trunk under the commission's certificate to build the proposed line from Bend to Paunina, Ore., for the Great Northern to operater under an agreement with the Southern Pacific and Central Pacific over the Natron Cut-off line from Paunina to Klamath Falls; and for the Great Northern to extend its operations between its connections with the line of the Spokane, Portland & Seattle at Fort Wright Junction and Vancouver, Wash., on the one hand and Bend, Ore., on the other, over the lines of the S. P. & S., the Oregon Trunk and the Des Chutes. The Oregon Trunk, in a joint application, also asked to be relieved of its obligation to build the line from Bend to Paunina. The Great Northern says that on the granting of the applications it will be in a position to and will furnish adequate and efficient transportation service between Bend and Klamath Falls and in general between the Klamath Basin and south Central Oregon, on the one hand, and north central Oregon and Washington and all points east thereof on the other. It is to pay the Southern Pacific one-half of five per cent per annum on the cost of the Natron Cut-off and a use proportion of operating expenses and taxes.

Construction and Abandonment of Line.—The Interstate Commerce Commission has issued a certificate authorizing this company to construct a new line from Berne, Wash., to Scenic, 10.29 miles, and to abandon operation of its present line, 17.94 miles, between the same points. This is in connection with the company's relocation of its main line across the Cascade Mountains. The company contended that the project did not require a certificate of public convenience and necessity, but the commission held that it had jurisdiction within the provisions of paragraph 18 of section 1 of the Interstate Commerce Act.

MINNEAPOLIS & ST. LOUIS.—1926 *Earnings.*—Annual report for 1926 shows a deficit after interest and other charges of $2,017,136, as compared with $1,905,210 for 1925. Selected items from the income statement follow:

	1926	1925
Average mileage operated	1,627.80	1,634.77
RAILWAY OPERATING REVENUES	$14,733,725	$15,074,273
Maintenance of way	$2,459,003	$2,442,591
Maintenance of equipment	3,284,039	3,256,075
Transportation	6,615,780	6,571,801
TOTAL OPERATING EXPENSES	$13,305,390	$13,220,168
Operating ratio	90.31	87.70
NET REVENUE FROM OPERATIONS	$1,428,335	$1,854,106
Railway tax accruals	750,465	760,858
Railway operating income	$674,892	$1,090,215
Equipment rents—Dr.	361,269	628,022
Joint facility rents—Dr.	91,449	98,328
NET RAILWAY OPERATING INCOME	$222,173	$363,865
Non-operating income	165,742	147,728
GROSS INCOME	$387,915	$511,593
Rent for leased roads	135	25
Interest on funded debt	$2,036,542	$2,055,160
TOTAL DEDUCTIONS FROM GROSS INCOME	$2,405,051	$2,416,803
NET DEFICIT	$2,017,136	$1,905,210

NEW YORK CENTRAL.—*To Issue Stock.*—The New York Central announced on June 29 plans to issue $38,325,000 new capital stock equivalent to 10 per cent of the amount at present outstanding and the offering of these shares to stockholders at $100 a share on the basis of one share of new stock to each 10 shares of stock now held. The new stock will be offered to stockholders of record on August 10 and as soon after that date as possible warrants are to be mailed to shareholders specifying the number of shares for which each may subscribe. Certificates of stock will be issued only for full shares. The warrants will be of two types, one for full-share subscriptions and the other for frac-

tional subscriptions which, when aggregated, will entitle the holder to purchase one or more shares. The warrants will be transferable.

Subscriptions will be received by the general treasurer of the New York Central Railroad in New York City and by Morgan, Grenfell & Co. in London, England, until November 1, when the subscription right will terminate. It is reported that application will be made to list the new stock on the New York Stock Exchange.

The subscription rights on the new stock are valued at about $4.50 a share. See feature article on other pages of this issue relative to New York Central operations.

SEABOARD AIR LINE.—*Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority for an issue of $850,000 of 4½ per cent equipment trust certificates, to be sold to Dillon, Read & Co., at not less than 97.60.

SEABOARD AIR LINE.—1926 *Earnings.*—Annual report for 1926 shows net income after interest (including interest on adjustment bonds) and other fixed charges of $3,178,811, equivalent after allowance for dividends on the 4 and 6 per cent preferred stocks to $5.99 a share on the common stock. Net income in 1925 was $2,584,975 or $4.39 a share. Selected items from the income statement follow:

	1926	1925
RAILWAY OPERATING REVENUES	$67,024,853	$62,864,711
Maintenance of way	$8,984,653	$8,466,901
Maintenance of equipment	10,122,639	10,141,243
Transportation	24,850,183	22,928,176
TOTAL OPERATING EXPENSES	$49,253,002	$46,733,364
Operating ratio	73.48	74.34
NET REVENUE FROM OPERATIONS	$17,771,852	$16,131,347
Railway tax accruals	3,472,001	3,023,401
Railway operating income	$14,280,898	$13,085,363
NET RAILWAY OPERATING INCOME	Not shown	
Other income	$1,998,947	$1,202,651
GROSS INCOME	$16,279,845	$14,288,014
Hire of equipment—Dr.	2,129,363	2,148,605
Rent for leased roads	1,494,057	942,869
Interest on funded debt	6,359,379	5,615,743
TOTAL DEDUCTIONS FROM GROSS INCOME	$11,526,067	$10,202,854
NET INCOME (exclusive of interest on adjustment mortgage (income) bonds)	$4,753,778	$4,085,160
Interest adjustment mortgage (income) bonds	$1,250,000	$1,250,000
NET INCOME	$3,503,778	$2,835,160
Deduct annual allotment of discount on funded debt	$325,108	$250,184
Surplus carried to credit of profit and loss	$3,178,670	$2,584,976

SEABOARD AIR LINE.—*Tentative Valuation.*—The Interstate Commerce Commission in its tentative valuation report finds the final value for rate-making purposes as of 1918 to be $125,366,000 for the carrier property owned and used and $129,616,457 for that used, including leased lines.

The outstanding capitalization as of valuation date was $190,938,527, and its book investment in road and equipment, including land, was $190,397,699. With readjustment required by the accounting examination, the report says, this would be reduced to $187,946,745. Cost of reproduction new, exclusive of land, was placed at $127,824,310 for the property used, and the cost of reproduction less depreciation at $101,195,474. A total of 54,512 acres of carrier lands was assigned a present value of $20,099,981. The company also held securities and other investments of a par value of $8,566,786 and a book value of $6,025,356.

Valuation Policies of I. C. C. Criticized.—S. Davies Warfield, president of the Seaboard Air Line, in connection with the tentative valuation figures said:

"These figures of tentative valuation of the Seaboard Air Line as announced, do not include certain subsidiaries, nor do they include anything for other values or elements of value. The announced tentative valuation is as of June 30, 1918, and does not include any of the new Florida lines or the great amounts expended in additions, improvements, betterments or extensions made in the last nine years.

"The Seaboard, like nearly ever other railroad that has been valued, will not accept the commission's tentative valuation as announced. This valuation is based on 1914 prices, and is for rate-making purposes. The Seaboard is one of some 20 carriers composing the southeastern group, and rates are made on the aggregate value of all of the roads of that group. Along with other Class I railroads of the country, we will, of course, take our case before the courts in due time, after we have attended hearings before the commission, with a view of submitting important data which we were not given an opportunity to file in certain schedules in connection with depreciation and in other directions, which should have been filed prior to the tentative valuation announced.

"The public has ceased to be interested in the valuation of railroad properties as announced by the commission—which itself is nearly evenly divided for and against the methods that are now employed by the commission in valuing the properties of railroads—with the knowledge on the part of the public that the commission's method must go for adjudication before the U. S. Supreme Court, with the decision of the courts thus far inclined toward the policy advocated by the minority members of the commission outlined in their report in the O'Fallon case. This state of mind is due to the firm conviction that the policy adopted by the majority members of the commission will be reversed by the U. S. Supreme Court."

SMOKY MOUNTAIN.—*Acquisition of Line.*—This company has been authorized to acquire a line from Vestal in Knox County, Tenn., to Sevierville in Sevier County, 27.8 miles, and to issue not exceeding $75,000 of stock in payment thereof. The commission also authorized the Tennessee & North Carolina to acquire control of the Smoky Mountain by lease. The line in question was formerly owned by the Knoxville, Sevierville & Eastern; it was sold at foreclosure in 1921, later acquired by the Knoxville & Carolina and came into possession of the Smoky Mountain at a sale in October, 1926, at which time the officers and directors of the Tennessee & North Carolina bid in the property for $75,000 and acquired the Smoky Mountain charter. The commission has found a final value of the Knoxville, Sevierville & Eastern of $400,000. The Tennessee & North Carolina and the Smoky Mountain do not connect, but it is planned to co-ordinate the service performed by the two lines for l.c.l. shipments by the use of motor trucks.

SOUTHERN PACIFIC. — *Abandonment.* — The Interstate Commerce Commission has authorized this company to abandon a branch between Crump, Cal., and Alcalde, 3.18 miles, which line was originally built to serve a coal operation.

SOUTHERN PACIFIC.—*Equipment Trust Certificates.*—This company has applied to the Interstate Commerce Commission for authority for an issue of $5,786,000 of 4½ per cent equipment trust certificates, to be used in the purchase of equipment to the amount of $8,905,000, and to be sold at 99.52 and interest to the Mellon National Bank, of Pittsburgh, and Salomon Brothers & Hutzler, of New York, the highest bidders.

WESTERN MARYLAND.—*Bonds Sold.*—Kuhn, Loeb & Co., Speyer & Co., and the National City Company have offered at 99½ and accrued interest, $12,000,000 first and refunding mortgage 5½ per cent bonds, series A, due July 1, 1977. The bonds are redeemable at the option of the company, as a whole only, upon 60 days' notice on any interest date on and after July 1, 1937, and on or before July 1, 1967, at 105 and accrued interest and thereafter at their principal amount and accrued interest plus a premium equal to one-half per cent for each six months between the redemption date and the date of maturity. The proceeds of the sale are to be applied in part to the redemption of $10,822,800 short term notes bearing an average interest rate of about 6½ per cent, thus effecting a considerable saving in the company's annual interest charges. Details concerning the issue are given as follows:

The first and refunding mortgage bonds will be secured by a first lien on 119 miles of railroad of the company and on certain valuable waterfront terminal properties, warehouse structures, grain elevators, etc., in Baltimore and by a first collateral lien on an additional 21 miles of branch lines tapping important bituminous coal fields in West Virginia and Pennsylvania. After completion of this financing, the bonds will be secured on the remaining 504 miles of the directly owned lines of the company and appurtenances thereto, subject to $48,256,900 principal amount of prior liens on various parts of the properties, none of which may be renewed or extended and for the retirement of which first and refunding mortgage bonds are reserved. They are in addition secured, subject to the prior liens mentioned above, and, in respect to part of the equipment, subject also to outstanding equipment trust certificates, by a lien on all the equipment owned by the company which on June 1, 1927, had a depreciated book value of $19,137,726 over equipment trust certificates outstanding after the completion of this financing. The line of railroad upon which these first and refunding mortgage bonds are a direct first lien, includes the important mileage from Cumberland, Md., to Connellsville, Pa., where connection is made with the Pittsburgh & Lake Erie for passage into Pittsburgh. The Western Maryland exchanges a large amount of traffic with The Baltimore & Ohio at Cherry Run, W. Va., and other junction points.

The bonds will be issued under the company's first and refunding mortgage dated July 1, 1917, and an indenture supplemental thereto, to be dated July 1, 1927. The mortgage is limited to a total of $150,000,000 principal amount of bonds at any time outstanding. The bonds are issuable in series, shall bear interest at such rates (not exceeding 6 per cent per annum) and shall mature at such times as the board of directors shall from time to time determine, subject to the provisions of the supplemental indenture. After this financing there will be outstanding in the hands of the public $12,000,000 bonds, and $10,910,000 bonds will be in the treasury of the company. The remainder of the authorized amount may be issued from time to time to retire prior lien bonds and for additions, betterments, improvements, construction or purchase of additional railroads or terminals (or securities representative thereof), for 90 per cent of the cost of equipment and for other corporate purposes, all under the restrictions and limitations provided in the mortgage and supplemental indenture, with the additional proviso that, when the aggregate amount of the bonds issued and the bonds reserved for refunding purposes shall amount to $100,000,000, additional bonds may be issued for capital expenditures only to the extent of 75 per cent of the cost thereof. A sinking fund of 5 per cent per annum for 20 years is provided in respect to any bonds issued for equipment.

WESTERN PACIFIC.—*No Dividend Action.*—Directors of the Western Pacific Railroad Corporation meeting on June 28 decided that consideration of further dividends on the preferred stock for 1927 be deferred until November, in accordance with the resolution adopted May 3 and reported in the *Railway Age* of May 7.

TOLEDO, PEORIA & WESTERN.—*Securities Authorized.* — The Interstate Commerce Commission has authorized the Toledo, Peoria & Western Railroad to issue, in addition to $5,000 common stock authorized last March $60,000 of common stock and $1,000,000 first mortgage 6 per cent bonds, series A, in payment of the balance of the purchase price of the former Toledo, Peoria & Western Railway. The company asked authority to issue these securities in the original proceedings and the commission held the original record open in order that the carrier might modify the proposals made at that time.

Average Price of Stocks and Bonds

	June 28	Last week	Last year
Average price of 20 representative railway stocks..	111.75	114.10	96.61
Average price of 20 representative railway bonds..	93.63	93.76	91.03

Valuation Reports

The Interstate Commerce Commission has issued final or tentative valuation reports finding the final valuation for rate-making purposes of the property owned and used for common-carrier purposes, as of the respective valuation dates, as follows:

FINAL REPORTS		
Washington Run	$271,000	1918
TENTATIVE REPORTS		
Philadelphia Belt Line	$265,500	1918
Rowlesburg & Southern	84,250	1918
Athens Terminal Co.	197,000	1918

Dividends Declared

Allegheny & Western.—3 per cent payable July 1 to holders of record June 20.

Atchison, Topeka & Santa Fe.—Common, $0.75, extra, payable September 1 to holders of record July 22.

Belt Railroad & Stock Yards, Ind.—Common, 2 per cent, quarterly; preferred, 1½ per cent, quarterly, both payable July 1 to holders of record June 21.

Carolina, Clinchfield & Ohio.—Common, ¾ per cent, quarterly; stamped stock, 1¾ per cent, quarterly, both payable July 10 to holders of record June 30.

Central of Georgia.—3 per cent, payable June 30 to holders of record June 30.

Central Railroad of New Jersey.—2 per cent, quarterly, payable August 15 to holders of record August 5; 2 per cent, extra, payable July 15 to holders of record July 5.

Elmira & Williamsport.—Preferred $1.61, payable July 1 to holders of record June 20.

Georgia Rialroad & Banking.—2½ per cent, quarterly, payable July 15 to holders of record July 2.

Illinois Central.—Common, $1.75, quarterly; preferred, $3.00, semi-annually, both payable September 1 to holders of record August 5.

Joliet & Chicago.—1¾ per cent, quarterly, payable July 5 to ho'ders of record June 24.

Lehigh Coal & Navigation.—2 per cent, quarterly; ½ per cent, extra, both payable August 31 to holders of record July 30.

New London Northern.—2¼ per cent, quarterly, payable July 1 to holders of record June 16.

New Orleans & Northeastern.—6 per cent, payable June 27 to holders of record June 20.

Philadelphia & Camden Ferry.—$2.00, quarterly, payable July 11 to holders of record June 22.

Pittsburgh, Cincinnati, Chicago & St. Louis.—2½ per cent, payable July 20 to holders of record July 9.

Reading Company.—Common, 2 per cent, quarterly, payable August 11 to holders of record July 14. First preferred, 1 per cent, quarterly, payable September 8 to holders of record August 22. Second preferred, 1 per cent, quarterly, payable October 13 to holders of record September 20.

Railway Officers

Changes On the Southern

Pursuant to a general re-districting of the Southern, the following changes have been announced: **J. W. Wassum,** general superintendent, Lines east, with headquarters at Charlotte, N. C., has been appointed assistant to vice-president, with headquarters at Columbia, S. C. **O. B. Keister** has been appointed general superintendent, Memphis & Charleston district, with headquarters at Knoxville, Tenn., and **L. F. DeRamus** has been appointed general superintendent, Piedmont district, at Danville, Va. **W. C. Hudson** has been appointed general superintendent, Queen & Crescent district, at Chattanooga, Tenn., **H. H. Vance,** general superintendent, Alabama district, at Birmingham, Ala., and **B. G. Fallis,** general superintendent, St. Louis-Louisville district, at St. Louis, Mo.

R. K. McClain has been appointed superintendent of transportation, lines East, with headquarters at Knoxville, Tenn., with jurisdiction over the following territory: Memphis division, Riverton branch, Knoxville division, Coster division, Appalachia division, Asheville division, Knoxville & Augusta Railroad and the Knoxville & Bristol Railway. **H. L. Hungerford** has been appointed superintendent of transportation, lines East, with headquarters at Charlotte, N. C., with jurisdiction over the Washington division, Danville division, Charlotte division, Winston-Salem division, Richmond division, Norfolk division, Columbia division, Charleston division and the Spartanburg division. **W. N. Harper** has been appointed assistant to the general superintendent of transportation, lines East, with headquarters at Charlotte, N. C. **D. B. Nolan** has been appointed superintendent of transportation, lines West, with headquarters at Macon, Ga., with jurisdiction over the Atlanta division, Georgia Southern & Florida Railway, St. Johns River Terminal, Birmingham division, Mobile division, and the Northern Alabama Railway. **C. Chandler** has been appointed superintendent of transportation of the lines West, with headquarters at Chattanooga, Tenn., with jurisdiction over the following territory: Cincinnati, New Orleans & Texas Pacific Railway, Chattanooga Terminal, Alabama Great Southern Railroad, New Orleans & Northeastern Railroad, New Orleans Terminal, the Woodstock & Blocton Railway, Cincinnati, Burnside & Cumberland River Railway, Harriman & Northeastern Railroad, St. Louis division and the Louisville division. **L. M. Triplette** has been appointed assistant to the general superintendent of transportation, lines West, with headquarters at Cincinnati, Ohio.

M. O. Dunbar has been appointed superintendent of the Charlotte division at Greenville, S. C., succeeding **H. L. Hungerford,** promoted. **W. F. Cooper** has been appointed superintendent of the Columbia division at Columbia, S. C., succeeding **W. L. King,** transferred. **H. B. Munday,** has been appointed superintendent of the Richmond division at Richmond, Va., succeeding **C. G. Arthur,** assigned to other duties. **C. P. King** has been appointed assistant to the general superintendent, Memphis & Charleston district, with headquarters at Charleston, S. C. **S. S. Brooks** has been appointed superintendent of the Asheville division with headquarters at Asheville, N. C., succeeding Mr. McClain. **W. L. King** has been appointed superintendent of the Appalachia division at Bristol, Va., succeeding Mr. Brooks. **W. H. Cheney** has been appointed superintendent of the Spartanburg division at Spartanburg, S. C., succeeding Mr. Dunbar. **F. M. Hair** has been appointed superintendent of the Charleston division at Charleston, S. C., succeeding **C. P. King,** assigned to other duties, and **T. C. Blackwell** has been appointed superintendent of the Memphis division at Sheffield, Ala., succeeding Mr. Chandler.

The jurisdiction of the following officers has been extended over the Memphis division: **W. M. Cowhig,** general superintendent of transportation; **G. L. Sitton,** chief engineer maintenance-of-way and structures; **E. M. Sweetman,** superintendent of motive power; **J. B. Lamb,** signal and electrical superintendent; **J. R. Smith,** superintendent of telegraph; **C. G. Arthur,** assistant to superintendent of motive power; **I. Cox,** inspector of police and **G. R. Buddin,** inspector of transportation.

G. P. Asbury has been appointed engineer maintenance-of-way, Piedmont district, at Danville, Va., with jurisdiction over the Washington division, Danville division, Richmond division, Norfolk division and Winston-Salem division. **G. E. Buckley** has been appointed engineer maintenance-of-way at Charlotte, N. C., with jurisdiction over the Columbia division, the Charlotte division, the Spartanburg division and the Charleston division. **J. A. Killian** has been appointed engineer maintenance-of-way, Memphis & Charleston district, at Knoxville, Tenn., with jurisdiction over the Memphis division, Riverton branch, Knoxville division, Coster division, Asheville division, Appalachia division, Knoxville & Augusta Railroad and Knoxville & Bristol Railway. **R. Hayes** has been appointed engineer maintenance-of-way, Queen & Crescent district, at Chattanooga, Tenn., with jurisdiction over the Cincinnati, New Orleans & Texas Pacific Railway, the Alabama Great Southern Railroad, the New Orleans & Northwestern Railroad, the New Orleans Terminal, the Cincinnati, Burnside & Cumberland River Railway, the Harriman & Northeastern Railroad and the Woodstock & Blockton Railway. **J. S. Sharp** has been ap-

pointed engineer maintenance-of-way, Queen & Crescent district, at Macon, Ga., with jurisdiction over the Atlanta division, the Georgia Southern & Florida and the St. Johns River Terminal. **H. E. Tyrrell** has been appointed engineer maintenance-of-way, St. Louis-Louisville district, at St. Louis, Mo. **R. D. Tobien** has been appointed engineer maintenance-of-way, Alabama district, at Birmingham, Ala. **C. H. Arthur** has been appointed assistant to the superintendent of motive power, lines East, at Charlotte, N. C.

Financial, Legal and Accounting

Bertram Quelch, who has been appointed auditor of passenger receipts of the Atlantic Coast Line, with headquarters at Wilmington, N. C., was born on August 2, 1874, at Bowburn Durham, England. He was educated at Boys Model School, Durham, England, until June, 1886, and at Tileston School, Wilmington, N. C., from October, 1886, until May, 1890. He entered railway service on November 1, 1890, with the Atlantic Coast Line, and served as clerk in various capacities until July 1, 1902. Mr. Quelch served as chief clerk to the auditor of passenger receipts until April 4, 1921, and as assistant auditor of passenger receipts until May 31, 1927. On June 1, 1927, he was appointed auditor of passenger receipts.

Bertram Quelch

Ralph Blaisdell has been appointed general auditor of the Florida East Coast Car Ferry Company and will have full charge of all accounting and auditing, reporting to the board of directors through the vice-president and treasurer. Mr. Blaisdell is also appointed assistant treasurer and will handle matters of that office as prescribed by the by-laws. Mr. Blaisdell succeeds **M. F. Harden**, resigned.

Operating

W. R. Triem has been appointed freight trainmaster on the Panhandle division of the Central Region of the Pennsylvania, with headquarters at Pittsburgh, Pa.

C. F. Smith, assistant to the president of the Cincinnati, Indianapolis & Western, with headquarters at Indianapolis, Ind., has been appointed assistant to the general manager of the Western lines of the Baltimore & Ohio, with headquarters at Cincinnati, O., following the merging of the management of the Cincinnati, Indianapolis & Western with the Baltimore & Ohio.

W. C. Owens, superintendent of the Kamloops division of the Western region of the Canadian National, with headquarters at Kamloops Junction, B. C., has been transferred to the Winnipeg division, with headquarters at Winnipeg, Man. **J. H. McKinnon**, superintendent of the Duluth, Winnipeg & Pacific, with headquarters at Virginia, Minn., has been transferred to succeed Mr. Owens.

C. E. Milliron, superintendent of dining car service on the Pennsylvania, lines west of Pittsburgh, with headquarters at Columbus, Ohio, has been appointed superintendent of dining car service, lines east of Pittsburgh, with headquarters at New York, succeeding **H. H. Baker**, appointed special agent and assigned to the staff of **William Pedrick, Jr.**, general passenger agent, with headquarters at New York. **J. F. Finnegan**, special representative in the passenger traffic department at Chicago, has been appointed superintendent of dining car service at Columbus, succeeding Mr. Milliron.

C. L. Walden, passenger trainmaster, South Florida division of the Seaboard Air Line, has been transferred to the East Florida division, with headquarters at West Palm Beach, Fla., succeeding **W. A. Lane**, passenger trainmaster, who has been transferred to the South Florida division, with headquarters at Arcadia, Fla. **F. M. Bennett**, assistant trainmaster, West Florida division, has been transferred to the South Florida division, with headquarters at Arcadia, Fla., succeeding **H. M. Turner**, assistant trainmaster, who has been transferred to the West Florida division, with headquarters at Tampa, Fla. **Walker Wilson** has been appointed assistant trainmaster, West Florida division, with headquarters at Tampa, Fla., succeeding **D. S. Lynch**, transferred.

J. S. Crews has been appointed general superintendent of the following companies: the Raleigh & Charleston, with headquarters at Marion, S. C., and Macon, Ga.; the Chesterfield & Lancaster, with headquarters at Cheraw, S. C., and Macon, Ga.; the Charlotte, Monroe & Columbia, with the same headquarters; the Tavares & Gulf, with headquarters at Tavares, Fla., and Macon, Ga.; the Savannah & Statesboro, with headquarters at Statesboro, Ga., and Macon, Ga. The position of general manager on the last mentioned road has been abolished. The traffic and operating departments of the Tavares & Gulf have been separated and **C. A. Carpenter**, now superintendent of traffic and operation at Tavares, Fla., has been transferred to the traffic department, and **F. C. Summer** has been appointed superintendent, with the same headquarters. **D. C. Smith** has been appointed superintendent of the Savannah & Statesboro, with headquarters at Statesboro, Ga.

Edward L. Henry, who has been promoted to superintendent of the Iowa division of the Chicago & North Western, with headquarters at Boone, Iowa, was born on July 7, 1879, at Malcom, Iowa. After attending high school at that point he entered the service of the North Western on September 26, 1899, as a brakeman, being employed in this capacity until his promotion to conductor on October 1, 1908. Mr. Henry left the ranks of the trainmen with his promotion to trainmaster on the Southern Illinois division on January 10, 1917, where he remained until August 5, 1920, when he was transferred to Ames, Iowa. The following year he was transferred to Wall Lake, Iowa, also serving more than a year at Ames during 1923 and 1924 before his advancement to assistant superintendent, with headquarters at Clinton, Iowa, on January 1, 1925. Mr. Henry held the position of assistant superintendent at Clinton until his further promotion to superintendent of the Iowa division on June 1.

Edward L. Henry

Traffic

George Munro has been appointed general agent in the freight department of the New York Central, with headquarters at St. Paul, Minn.

L. H. Trimble, special representative of the general freight office of the Southern Pacific at Los Angeles, Cal., has been appointed general agent of perishable freight traffic, with headquarters at San Francisco, Cal.

A. M. Culver, general agent for the Oceanic Steamship Company at Los Angeles, Cal., has been appointed general agent for the Chicago & Illinois

Midland, with headquarters at the same point.

S. B. Murdock, general Eastern passenger agent of the Seaboard Air Line at New York, has been appointed assistant passenger traffic manager, with headquarters at Norfolk, Va., and in New York City.

F. B. Houghton, freight traffic manager of the Atchison, Topeka & Santa Fe, with headquarters at Chicago, has been elected vice-president in charge of traffic, with headquarters at the same point. **C. C. Dana,** assistant freight traffic manager, with headquarters at Chicago, has been promoted to succeed Mr. Houghton.

William D. Corfield has been appointed general freight agent of the Reading, with headquarters at the Reading Terminal, Philadelphia, succeeding **Richard C. Campbell,** deceased. Mr. Corfield, after finishing school, entered the service of the Philadelphia & Reading (now the Reading) as a waybill clerk, serving in that capacity at various stations. Upon reorganization of the freight soliciting department in 1895, he was assigned to that department and upon formation of the Blue Ridge despatch, was successively, agent and general agent, returning to the Philadelphia & Reading as division freight agent

W. D. Corfield

in January, 1912. During the war, he was assigned to the North Atlantic Ports Commission of the United States Railroad Administration located at Broad Street Station, Philadelphia. During the recent illness of Mr. Campbell, Mr. Corfield was appointed acting general freight agent.

Garnett King, who has been promoted to assistant passenger traffic manager of the Southern Pacific, with headquarters at San Francisco, Cal., was born on December 14, 1876, at Russellville, Ky., where he obtained his high school education. He entered railway service in 1900 as a bookkeeper and paymaster on the Arizona & New Mexico (now a part of the Southern Pacific) at Clifton, Ariz. In 1903 Mr. King was appointed a traveling freight and passenger agent on the El Paso & Southwestern, with headquarters at El Paso, Tex., becoming a general agent of this company and the Chicago, Rock Island & Pacific at the same point in 1907. From 1909 to 1914 he acted as assistant general freight and passenger agent of the E. P. & S. and the latter year he was promoted to general passenger agent, with headquarters at the same point, where he remained until December, 1922, when he was appointed assist-

Garnett King

ant traffic manager at San Francisco. Following the acquisition of the E. P. & S. by the Southern Pacific he was appointed assistant to the passenger traffic manager of the latter company in December, 1924, with headquarters at San Francisco, a position he held until his further advancement to assistant passenger traffic manager of the Southern Pacific.

Engineering, Maintenance of Way and Signaling

R. L. Sims, who has been promoted to district engineer of maintenance of the Nebraska district on the lines of the Chicago, Burlington & Quincy west of

R. L. Sims

the Missouri river, with headquarters at Lincoln, Neb., was born on December 12, 1891, at Sturgeon, Mo., and entered railway service in the maintenance of way department of the Burlington on March 4, 1912. He was advanced to section foreman at Lowder, Ill., during 1916, becoming extra gang foreman at the same point in the following year. On July 13, 1918, Mr. Sims was promoted to assistant roadmaster of the Beardstown division and in November, 1918, he was again promoted to roadmaster at Herrin, Ill. As roadmaster he was transferred successively to Centralia, Ill., and to the Chicago Terminal division. For a short period during 1922 Mr. Sims served as assistant trainmaster on the Beardstown division. He returned to the maintenance department the same year and until his appointment as district engineer of maintenance on April 4 he served successively as roadmaster on the Chicago Terminal division and on the Missouri district.

Special

A. D. Palmer has been appointed advertising manager of the New York Central Railroad, the Michigan Central, the Cleveland, Cincinnati, Chicago & St. Louis and the Pittsburgh & Lake Erie, with headquarters at New York.

Obituary

Henry Raymond Judah, who retired as assistant general passenger agent of the Southern Pacific, in 1917, died on June 16 at Los Altos, Cal. At the time of his retirement Mr. Judah had served 55 consecutive years in the freight and passenger departments of the Southern Pacific and at the time of his death he lacked a week of being 80 years of age.

Frank Joseph Hecker, at one time general superintendent of the Roundout & Oswego (now part of the Ulster & Delaware) and superintendent of the Eel River (now a part of the Wabash) from 1870 to 1879, died at his home in Detroit, Mich., on June 26. Mr. Hecker was born at Freedom, Mich., on July 9, 1846. After spending a year as a private and first sergeant in the Union army during the Civil war he entered railway service in 1866 in the operating department of the Union Pacific, becoming an acting division superintendent on that railroad at the age of 22. In 1870 he was appointed general superintendent of the Roundout & Oswego, later being appointed superintendent of the Walkill Valley (now a part of the New York Central) where he remained until 1876 when he was appointed superintendent of the Eel River, with headquarters at Logansport, Ind. Mr. Hecker was one of the organizers of the Peninsular Car Company, Detroit, in 1879, serving as its president until its absorption by the American Car & Foundry Company in 1900. During the Spanish-American war he was appointed by President McKinley as chief of the division of transportation of the army, serving in that capacity from July, 1898, to May, 1899. Mr. Hecker was a member of the Isthmian Canal Commission in 1904. Lately he had been engaged in a number of business enterpris. in Detroit.